LAW OFFICES

MCKENNA & CUNEO

1575 EYE STREET, N.W. WASHINGTON, D. C. 20005 (202) 789-7500

CABLE ADDRESS: MCKENCONN WASHDC TELEX (TWX) 710-822-0149 FAX (202) 789-7594 DENVER
SUITE 600
303 EAST SEVENTEENTH AVENUE
DENVER, COLORADO 80203

(303) 830-0700

BRUSSELS AVENUE LOUISE 287, BOX 7 B-1050 BRUSSELS, BELGIUM OII (322) 646-4910

ROBERT A. MATTHEWS
(ADMITTED ONLY IN NEW YORK)
DIRECT DIAL (202) 789-7737

LOS ANGELES

444 SOUTH FLOWER STREET

LOS ANGELES, CALIFORNIA 90071

(213) 688-1000

SAN FRANCISCO

STEUART STREET TOWER

ONE MARKET PLAZA

SAN FRANCISCO, CALIFORNIA 94105

(415) 543-0204

June 13, 1991

Mr. Arnold Bernas, Project Manager
Emergency and Remedial Response
Division
U.S. Environmental Protection Agency
Region II, Room 2930
26 Federal Plaza
New York, New York 10278

York Oil Site, Moira, New York;
Bristol-Myers Squibb Company's Response to Section
104(e) Information Request

Dear Mr. Bernas:

This letter and its enclosures respond to the information request issued by EPA to Bristol-Myers Squibb Company, by letter dated May 9, 1991, regarding the York Oil Site. By agreement with Michael A. Mintzer of the Office of Regional Counsel, the time for Bristol-Myers Squibb Company's response was extended to June 14, 1991.

It is worth noting the difficulty posed by responding to EPA's request for information relating to events and practices occurring 20-30 years ago. Notwithstanding substantial efforts by numerous personnel, we are unable to provide significant details regarding much of the information sought by EPA. Where available, we have relied on and enclose relevant, contemporaneous documents. In addition, we have consulted with employees from the Purchasing, Materials Handling and Raw Materials Departments who were involved in relevant operations during the specified time periods. In addition to the employees identified in the response document, the current employees who were principally responsible for assisting in the preparation of the enclosed response to EPA's information request are:

LAW OFFICES MSKENNA & CUNEO

Mr. Arnold Bernas June 13, 1991 Page 2

Gary S. Simone
Manager of Environmental Affairs
Bristol-Myers Squibb Company
P.O. Box 4755
Syracuse, New York 13221-4755
(315) 432-2000

William Favier, Manager Plant Engineering Bristol-Myers Squibb Company P.O. Box 4755 Syracuse, New York 13221-4755 (315) 432-2000

If you have any questions regarding the enclosed response to EPA's information request, please do not hesitate to contact the undersigned.

Sincerely yours,

Robert A. Matthews

Enclosures

cc: Michael A. Mintzer w/encl.

RESPONSE OF BRISTOL-MYERS SQUIBB COMPANY TO EPA REQUEST FOR INFORMATION (MAY 9, 1991)

YORK OIL SITE, MOIRA, NEW YORK

1. a. Request: State the correct legal name of the Company.

Response: Bristol-Myers Squibb Company. The former Bristol Laboratories is now a part of the Industrial Division of the Bristol-Myers Squibb Company. We are responding on behalf of Bristol-Myers Squibb Company.

b. Request: Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organized.

Response: Corporation; Incorporated in the State of Delaware.

c. Request: State the name(s) and business address(es) of the President and the Chairperson of the Board of the Company.

Response: Chairman of the Board and Chief Executive Officer

Richard Gelb 345 Park Avenue New York, NY 10154

d. Request: Provide the name and address for the agent for service of process for the Company in the state of incorporation and in New York State.

Response: Delaware - CT Corporation

New York - Ct Corporation 1633 Broadway

New York, New York 10019

e. Request: If the Company is a successor to another company, identify such other company and provide the same information requested above for the predecessor company.

Response: The Bristol-Myers Squibb Company has not been succeeded by any other company. Given the long history of the Bristol-Myers Squibb Company and its

predecessors, it would be unduly burdensome to specify all predecessor companies. Without waiving this objection, we note that Bristol-Myers Squibb Company is the successor to the Squibb Corporation, which merged with a subsidiary of Bristol-Myers Company on October 4, 1989. 2. Request: Describe the on-site procedures and protocols for servicing and maintaining transformers containing PCBs prior to 1983. Also, for the period between 1950 and 1979, describe the procedures for storage and disposal of oils which contained PCBs generated by the maintenance and servicing of transformers and of oils which contained PCBs from any damaged transformers. Response: The only records located indicate that Transformer Consultants, P.O. Box 3575, Akron, Ohio 44310, performed testing on the transformer oil in 1979 and that some company, perhaps Transformer Consultants, performed some testing in 1978. Starting in 1980, all testing and servicing of transformer oils was performed by Transformer Services, Inc. P.O. Box 1077, Regional Drive, Concord, NH

Prior to 1979 a few sparse records indicate that some routine inspections of transformers were performed by Westinghouse Electric Corporation, 4030 New Court Road, Syracuse, NY 13206; however, there is no record of their procedures or whether any oils were generated and disposed Copies of the records identifying Transformer Consultants, Transformer Services and Westinghouse Electric are enclosed.

3. Request: Describe, in detail, the origins of these a. waste oils. Include a description of how oils were used in gearboxes and utilities equipment at Bristol.

> Response: These oils were used in production gearboxes and utilities equipment gearboxes for lubrication. Routine preventive maintenance included the replacement of this oil on a periodic basis. oil removed during these preventive maintenance checks constitutes the waste oil generated.

b. Request: Describe the materials of construction of the company's gearboxes, utilities equipment, and any other equipment which utilized this oil. Also provide an approximation of the operating temperature of this equipment.

Response: Most of the larger gearboxes (accounting for an estimated two-thirds of all oil used in the

lubrication of such equipment) which were in service during the period 1970 to 1973 remain in service today. These gearboxes are cast iron with steel gears. Some gearboxes contain brass idler cages. Most gearboxes operate in the 125-130 degree Fahrenheit range. The fermenter gearboxes operate in the 150-160 degree Fahrenheit range. Some utilities compressor gearboxes operate slightly higher than this. c. Request: Identify all materials that oil may have contacted in the process in which it was used, answering separately for each separate stream of waste oil, and specifically state whether such waste oil contacted stainless steel, lead, chromium, cadmium or nickel during any process or thereafter. Response: See Response 5.a., below, for identification of processes and equipment in which oil was used. The oil in all these processes contacted cast iron, steel and, in some cases, brass. the ball bearings utilized may have been chrome plated. No contact with stainless steel, lead, cadmium, or nickel has been identified. d. Request: Specify the volume of waste oils generated at the company's facility per annum between 1970-1973. Response: No records have been located which quantify the waste oils generated during the period 1970 to 1973. Based on discussions with Mr. Henry Skinner, a maintenance mechanic for over 20 years (see Response 3.g., below), we would estimate the volume of waste oil generated to be 500 to 900 gallons per year. Request: Was waste oil ever mixed with solvents, PCBs or other hazardous substances before it was removed from the company's facility? Response: According to Mr. Skinner (and newer mechanics who can verify related current procedures), in cleaning gearboxes during oil changes, small quantities of inhibisol and/or mineral spirits may have beeen used. These may, on occasion, have become mixed with the waste oils. No mixing with other solvents, PCB's or other hazardous substances is known to have occurred. f. Request: Was the waste oil which was removed from the company's facility between 1970 and 1973 ever analyzed - 3 -

for hazardous substances prior to removal? If so, provide copies of documents showing the results of this analysis and list the names, current addresses and telephone numbers of those persons responsible for analysis of this waste oil. Response: No records can be located regarding testing of this oil, nor is there a recollection of this occurring. But see specifications contained in documents enclosed as part of Response 5.b., below. Request: Provide the name and address of the outside vendor or vendors who pumped waste oil from the company's facility between 1970 and 1973. Provide any existing documentation, including contracts or records regarding the disposal of waste oils. If written records are not available, provide the names, current addresses and telephone numbers of the company's employees involved in the handling and treatment of

Response: No records have been located which identify outside vendors who pumped waste oil from the facility. Personnel who may have been involved in the handling and treatment of waste oils from 1970 to 1973 were:

Henry Skinner
(Maintenance Mechanic -- Current Bristol Employee)

Francis S. Norton (PM Department Head -- Retired 7/1/75) FOIA EX.6

waste oils from 1970 to 1973.

Carl E. Jacobs
(Manager of Maintenance -- Retired 2/1/73)
FOLA EX. 6

Jack Smith (PM Supervisor -- Deceased 11/9/90) FOLA EX. 6

Robert Kemerer (Director of Maintenance -- Deceased) No address known or available.

4. Request: Were any of the waste oils which were drummed, stockpiled or burned ever analyzed for hazardous substances prior to removal? If so, provide copies of documents showing the results of these analyses and/or list the names, current addresses and telephone numbers of those persons responsible for analysis of this waste oil.

Response: No records have been located indicating that any testing occurred nor is there a recollection of any testing being performed.

5. a. Request: Describe each process that produced waste oil; identify by description, manufacturer and model, each machine that generated waste oil.

Response: Major processes which are believed to have produced waste oil at that time were Fermentation (Fermenter Agitator gearboxes), Utilities (Air Compressor gearbox), and Development (Agitator gearboxes). The specific machines were:

i. Fermenter Agitator Gearboxes

Falk 10DX Gearbox - 8 ea.
Falk 11DX Gearbox - 3 ea.
Falk 12DX Gearbox - 5 ea.
Falk 11GDXX Gearbox - 3 ea.

ii. Air Compressor

Elliot Air Compressor 42H-3 Gearbox - 1 ea.

iii. Development Agitator Gearboxes

Lightning 319-TEC-15.2 Gearboxes - 25 ea.

The above referenced sources would account for approximately 2/3 of the waste oil. The remainder would be from a large number of smaller sources, difficult to recreate 30 years later.

b. Request: Identify oils used at the Syracuse Facility between 1960 and 1966 by type of oil and supplier.
Response: All oils used at the Syracuse Facility between 1960 and 1966 were virgin oils provided by Gulf Oil Company. None of these oils were reclaimed or used. Oils used included:
Gulf Harmony 32
Gulf Harmony 44
Gulf Harmony 46
Gulf Harmony 47
Gulf Harmony 53
Gulf Harmony 68

Gulf Harmony 68 Gulf Harmony 69 Gulf Harmony 76 Gulf Harmony 97 Gulf Harmony 115 Gulf Harmony 150N Gulf Harmony 220 Gulf Harmony 460 Gulf Harmony 680 Gulfcut 21D Gulfcut 41D Gulf E.P. Lubricant 75 Gulfspin 35 Gulf E.P. Lubricant R150 Gulspin 10 Gulf Paramount 49 Gulf Security 53 Gulf Paramount 68 Gulf Security 68 Gulf Senate 155 Gulf Senate 186 Gulf Senate 460 Gulf Senate 680

We were able to locate (and herein enclose) Gulf Oil Company's specifications for several listed products. As these documents demonstrate, the oil used for lubrication, and any waste oil generated from such use, would not contain PCBs or other contaminants.

c. Request: Identify by description, manufacturer and model, each machine that generated waste oil.

Response: See Response 5.a., above.

d. Request: Identify all materials that oil may have contacted in the process in which it was used,

answering separately for each separate stream of waste oil, and specifically state whether such waste oil contacted stainless steel, lead, chromium, cadmium or nickel during any process or thereafter.

Response: See Response 3.c., above.

e. Request: Identify any analysis performed at any time from 1960 to the present of the type of waste oil generated between 1960 and 1966 at the Syracuse Facility and provide copies of test results and any other documents relating or referring to such analysis.

Response: No records have been located.

Quick Guide to Gulfcut® Oils

Ranges of Dury

Several Gulfcut oils have the same rating as to machinability. The ranking below from light to heavy duty within each rating.

	General Ranking	Severity
Group I	Free-machining steels	43B 41B 41M 41D 41E
Group II	Intermediate steels	31A 31C 45A
Groups III, IV	Difficult steels	21D 45B 45B/44A blends
Group V	Free-machining nonferrous	11D 11A
Group VI	Difficult nonferrous	11A 41B 41M 41D 41E 45A

Classifications by Machinability

Ferrous	Machinability Rating*							Gul	fcut l	Prod	uct				
		11A	11D	21D	31A	31C	41B	41D	41E**	41H	41M	43B**	44A	45A	45B
Group I	>70						ж	х	х	х	X.	х			
Group II	>50-<70				х	х				x				х	
Group III, IV	<50			х						х			(x	blend	x)
Nonferrous					200 T 100 T 100										
Group V	>100	х	х												
Group VI	<100	х					х	х	х		х			х	:

^{*} Machinabilities: Ferrous ratings based on 100% for 1112 screw stock.

Nonferrous ratings based on 100% for leaded yellow brass.

Ask me pro from Gulf



Gulf Oil Corporation P.O. Box 1563 Houston, Texas 77001

^{**} Antimist oils

	· · · · · · · · · · · · · · · · · · ·		1	r		γ		χ	·	,				
	11A	11D.	21D	/ 31A	31C	41B	(41D) 41E	41H	41M	43B	44A	45A	45B
Gravity: API	23.1	40.2	22.1	25.1	23.0	24.3	23,3	26.3	22.2	24.9	24.4	26.7	21.5	19.7
Viscosity,												1		
Kin: cSt 40°C (104°F) 100°C (212°F)	40.0 6.6	1	32.0	20.9	34.8	23.7	29.8	31.3	45.0	18.8	29.3	11.6	38.3	67.1
SUV: Sec	0.0	-	4.7	4.0	5.3	4.1	4.74	5.6	5.9	3.9	4.8	3.0	6.1	7.8
37.8°C (100°F) 98.9°C (210°F)	202 47.8	40.8	166.6 42.2	110.2 39.6	180.4 43.9	124.2 39.9	155.0 42.2	161.3 44.8	230 45.7	100 39.3	151.9 42.4	67.5 36.3	197.5 46.1	350 52.6
Flash, OC: °C °F	179 355	129 265	177 350	174 345	171 340	163 325	171 340	188 370	193 360	163 325	168 335	157 315	163 325	182 360
Fire, OC: °C °F	196 385	146 295	182 360	202 395	182 360	177 350	188 370	210 410	216 395	182 360	179 355	168 335	177 350	210 410
Pour: °C °F	-15 +5	-4 +25	-48 -55	-34 -29	-34 -30	-46 -50	-37 -35	-15 +5	-34 -30	-21 -5	-40 -40	-21 -5	-32 -25	-21 -5
Color, ASTM D 1500	L 4.5	L 2.0	L 6.5	7.5	5.5 dil	5.0	L 5.5 dil	L 2.0	L4.0	L 5.5 dil	6.0	5.5 dil	L6.5 dil	6.5 dil
Neutralization No., ASTM D 974 Total Acid No.	7.73	0.03	0.45	0.34	0,46	0.11	1.8	0.35	3,3	0.36	0.07	0.51	1.5	0.53
Sulfur, B, Total: %	-:	_	2.64	1.82	1.80	0.24	0.83	0.38	•	0.84	0.14	3.44	2.02	3.38
Sulfur, Active ASTM D 1662	_	_	1.02	0.75	0.75	Nil	Nil	Nil	Nil	Nil	Nil	1.34	Nil	1.55
Chlorine: %	_	_	1.00		_	0.11	0.41	1.69	1.77	0.41	0.22	1.98	1.00	2.00
Fatty Oil: %	24	2	1.00	5.4	5.5	1.8	7.25	1.0	**	7.25	1.0	8.9	18.2	9.5

^{*—} Phosphorus, 0.13%; Sulfur, Nil **— Saponification No. 21

Gulf Harmony For gear reducers.

General Qualities and Characteristics

Refined from the finest crudes, blended with quality additives, Gulf Harmony® oils for gear reducers are formulated especially to meet the requirements of a quality gear lubricant. They offer high film strength, high lubricity, superior chemical stability, and good separation from water. Work-tested additives in Gulf Harmony oils enhance their ability to resist foaming and combat corrosion.

Application Requirements

Disastrous results occur when gears are permitted to operate without adequate lubrication. Operating gear reducers for long periods without using a properly selected lubricant will be equally destructive, if less dramatic. Metal-to-metal contact of the teeth results in rapid wear and eventual failure. A quality lubricant must have the proper fluidity to assure fast distribution of an oil film over the gear teeth that will resist rupture as the teeth slide over each other. The lubricant must be able to operate effectively under varying loads, temperature and speed, and resist invasion of contaminants that threaten chemical stability and long life.

Gulf Harmony oils have all of the physical and chemical properties to make them effective and efficient in meeting the rigid requirements of gear lubrication.

The wide viscosity range of Harmony oils that is available provides the correct fluidity and oil body for each gear speed, pressure and temperature. The tenacity of Gulf Harmony and its high film strength greatly reduces friction and assures a sufficient oil cushion for shock loads. The high chemical stability of Harmony oils amply protects against oxidation and assures durability under continuous circulation

and agitation while resisting foaming. They are especially well fortified with rust inhibitors and are outstanding in their ability to quickly and completely separate any moisture occurring from leaks or condensation.

Recommendations

Gulf Harmony 46, 68, 90, 150D, 220 and 320 are recommended for gear reducer applications in line with the general recommendations of AGMA.

American Gear	•
Mfg. Assoc.	Gulf Harmony
Lubricant No.	Grade
1	46
2	68
3	90
4	150D
5	220
6	320

While these grades meet most requirements, additional Gulf Harmony grades (32,115, 460 and 680) are available for use in gear reducers.

Harmony 78 E.P. oil is a special grade made for use as a marine-geared turbine lubricant. This oil has E.P. properties to meet Military Specification MIL-L-17331F (Ships) and has been approved by the Navy against this specification. This military specification is often referred to as Navy Symbol Oil 2190-TEP.

Selection of a grade for a particular application involves consideration of a combination of factors including operating speed, loading, temperatures, gearing design, and equipment manufacturers' recommendations. Consult with your Gulf representative regarding which Harmony grades are correct for your particular applications.

Tunical Bran	antico.		,								
Typical Prope	32	46	68	<u>90</u>	115	150D	220	320	(460)	680	78 EP
Former Designation	74	46	(<u>68</u>) 53	61	69	75	88/97	121	151	204	59EP
•	32	46	68	, <u>, , , , , , , , , , , , , , , , , , </u>		150	220	320	460		SYCE
ISO Viscosity Grade				00	00.7					680	
Gravity: °API	31.4	30.5	29.9	29	28.7	28.1	27.3	26.6	25.8	25.3	28.9
Viscosity, kinematic:											
cSt 40°C (104°F)	29.08	42.35	62.5	92.0	116.5	138.9	205	301	465	709	78.3
100°C (212°F)	5.09	6.46	8.34	10.78	12.41	14.04	18.22	23.42	31.12	41.13	9.59
Viscosity, SSU											
100°F	150.3	218	323	478	610	728	1084	1598	2492	3826	407
210°F	43.3	47.9	54.3	63 .1	69.3	75.8	93.4	116.6	152.5	200	58.7
Viscosity Index.											
ASTM D 2270	102	101	102	100	97	97	97	97	97	97	99
Flash,OC: °F	410	425	450	480	500	505	515	540	560	590	480
Fire,OC: °F	465	490	515	535	560	575	- 585	600	630	660	545
Pour: °F	+5	+5	+10	+10	+10	+5	+5	+5	+5	+5	+5
Color, ASTM D 1500	L0.5	L0.5		L1.5		_	_	_	_	_	
•	LU.5	LU.5	L1.0	L1.5	2.0	L3.0	L4.0	L5.0	L6.0	L7.0	L2.0
Carbon Residue,	0.07	0.07	0.00	0.40	• • • •	0.40					
Ramsbottom: %	0.07	0.07	0.08	0.10	0.11	0.42	0.51	0.62	0.73	0.80	0.03
Neutralization Value											
ASTM D 974,											
Total Acid No.	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15	0.15	0.24

Ask the pro from Gulf



Gulf Oil Corporation P.O. Box 1563 Houston, Texas 77001

REPORT OF TRANSFORMER TESTS

ELECTRIC CORPORATION



	Bristol							•			
Late of Test.	<u>5-25-53</u>	Customer	's Order		·		SY-164		8.0. No	1- 0-587	14
Type_SI_Co	re_Phase_	Three 115000	Cycle	s <u>60</u>	nsulating Fi	uld 013			<u> 36865</u>		
Windings (1)	10000/	12500		Volts _ Kva ⁽²⁾ _	10000/1	2500	Vol: Kvs	· (a)	· ;		Volts
(1) 11212	25 - 1092	50 - 1063	375 - 1	03500 F.C.	delta	5-700	NV&				Kva
-											
RESISTANCES, based on wat	EXCITING 60:	RRENT, LOSSI jurements. F	S AND I	MPEDANCE — Bas phase transfor	ed on norm	al rating, un sistances ar	less other e the sun	wise stated.	Losses ar	id regulat	ion are
		,				115.0		r	Kv		Kv
SERIAL NO		STANCE IN OHMS	AT 75°C	% EXCITE	LOSS WATTS	To_ual		то	Kv	то	Kv
	*		· T	AT 100% RATED VOLTAGE	AT 100% RATED VOLTAGE	10000]Kva		Kva		Kva
	(1)	(2)	(3)			LOAD LOSS WATTS 75°C	% IMP 75°C	LOAD LOSS WATTS 75°C	% IMP 75°C	LOAD LO	SS % IMP C 75°C
5066887	35.15	.01162		.406	16000	58920	11.77				
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			I								
					ļ	TOTAL LOSS	WATTS 75°C	TOTAL LOSS	WATTS 75°C	TOTAL LOS	S . WATTS 75°C
AVERAGE				.406	16000	74920	11.77				
GUARANTEE					<u> </u>	100% PF	12	6 PF	80% PF	1	% PF
	REGULATIO	N AT 75°C		AVERAGE		1.29			7.9		70 11
-				GUARANT	ŒE				1.42		
Serial No.	RISES—Avera	age rise in d 5842 *	egrees C.	, corrected to i							
(1) 103.5			55.8 I	ine A	ma (2)	with windi. امال	ings conne	3 40	aded as fol 8 Line	lows:	A
	к	v		A	mp. until e	onstant tem					Amp.
		WINDINGS			TOP		NT TEMP.			ATER	
_Load	(1)	(2)	(3)	GUARANTEE	FLUID	INGOING WATER	IDLE		BIGE GA		POUNDS
100%	52.0	52.3		55	47.8	WAIER	24.	J MI	lf-cool	R MIN.	PRESSURE
125%	53.3	53.2		55	38.0		33.		r blast		
INSULATION TE	STS	·			VOLT. WIN	AGE RATING DING TESTE	OF ID	TEST V APPLIE	OLTAGE D IN KV	141.0	N OF TEST
	APPLIED P	OTENTIAL	TESTS		115	000		23	0		60
(Voltage	e applied be	tween each	winding	and all	4	160		I .	.9		60
other w	indings conr			round.)	····						
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_	_		rust esci	ranstormer '	withstood t	ne above ins	sulation to	sts.	00		المستند
Signed Rich	D. Mo	ne		Date Ju	ne 1, 19	5 3	. Approved	. 1		500	915

Page 1 of 2 Pages

REPORT OF TESTS		
WESTINGHOUSE FORM 8481 P	*	
4		

Date 6-1-53

WESTINGHOUSE NO. SY-16400

APPARATUS_ Type SL Core Form Power Transformer

Bristol Labs Incorporated

SHOP ORDER NO. 1-U-5874

RATING 10000/12500 KVA, 115000/1160 Volts, three phase, 60 cycles.

Iron Loss Data at 110% Voltage

Serial

% Exciting Current

Watts Loss

5066887

.769

21500

Hot Spot Indicator Readings

(take from duplicate stock order 1-U-3633)

Serial

5066842

100%

87.8

95.5

125%

THE ABOVE IS A TRUE AND CORRECT RECORD OF DATA OBTAINED FROM TESTS AT THE WORKS OF WESTINGHOUSE ELECTRIC CORPORATION

PAGES OF PAGES

SIGNED R.D. Morris

ENGINEED

REPORT OF TRANSFOMER TESTS

Westinghouse Electric Corporation

NVERAGE IUARANTEE REGULATION AT 75°C AVERAGE GUARANTEE EMPERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. Frial No. Winding KV Amp. until constant temperature rise was reached. RISE OF WINDINGS BY RESISTANCE RISE OF WATER RISE OF WINDINGS BY RESISTANCE RISE OF WATER RISE OF WINDING VOLT RATING TEST VOLTAGE DURATION OR RESE APPLIED POTENTIAL TESTS WINDING VOLT RATING TEST VOLTAGE DURATION OR RESE APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding; KV from KV from KV from	-					نزرن								2/5\	35 TO 2	11.80	/_	- U L.	315	chaser
RESISTANCES, EXCITING CURRENT, LOSSES AND IMPEDANCE—Based on normal rating, unless otherwise stated. Losses and regulation are based on wattinet mosts. For three-phase transformers the resistances are the sum of the tone phases in series. RESISTANCE IN OHMS AT 75°C SERIAL NO. WINDINGS RESISTANCE IN OHMS AT 75°C WINDINGS RATED VOLTAGE V	7 -		<u> </u>	.O. No	_ s	16	4.)	111-		G.O.	<u> </u>		. A		Order No.	rchaser's	Р	<u>/ / 7 -</u>	1/1	of Test
ESISTANCES, EXCITING CURRENT, LOSSES AND IMPEDANCE—Based on normal rating, unless otherwise stated. Losses and regulation are based on wattment with the three phases in sories. RESISTANCE IN ORMS AT 75°C CURRENT RATED VOLTAGE		ilarity	<u> 2</u>		-3	:	Spec,	L.			771	g_Fluid	Insulatin	cles 🚣	Cy	ase	P	<i>1</i>	۱ <u>۱۲۲۲ کې د د د د د د د د د د د د د د د د د د </u>	•
RESISTANCE SERIAL NO. RESISTANCE IN OHMS AT 75°C VOLTAGE VOLTAGE REGULATION AT 75°C RAFED RAFED REGULATION AT 75°C RAFED RAFED RAFED RAFED REGULATION AT 75°C RAFED RAFED RAFED RAFED REGULATION AT 75°C RAFED RAFED REGULATION AT 75°C RAFED REGULATION AT 75°C RAFED RAFED REGULATION AT 75°C RAFED RAFED RAFED RAFED REGULATION AT 75°C RAFED RAFED RAFED REGULATION AT 75°C RAFED			<u>'</u>				inding	Wi	-	 	e e desir e	<u> </u>	9	Windin		`		/	17	ding
PERATURE RESULATION AT 75°C RAGE REQUIATION AT 75°C REQUIATION AT 75°C REQUIRED TOTAL LOSS 9, 1MP. 75°C							va	Kv		. <u>5/</u>	<u> </u>			Kva						
PERATURE RESULATION AT 75°C RAGE REQUIATION AT 75°C REQUIATION AT 75°C REQUIRED TOTAL LOSS 9, 1MP. 75°C							itage	V	/	<u> </u>	- /-	-	10.25	Voltage	· 2.6- 2		27		_	age
RESISTANCE IN OHMS AT 75°C SERIAL NO. WINDINGS RESISTANCE IN OHMS AT 75°C WINDINGS RESISTANCE IN OHMS AT 75°C									26.4	1.);= 5.	<u> </u>	<u> </u>	·- * 0.3 ft 1	X	1 (3875 - N		4.5	· _ +()		1.14
RESISTANCE IN OHMS AT 75°C SERIAL NO. WINDINGS AT 100% AT 100% AT 100% AT 100% WATTS 75°C WITH MINDINGS BY RESISTANCE TO AMBIENT TEMP. WATTS 75°C WATTS 75°C WITH MINDINGS BY RESISTANCE TO AMBIENT TEMP. WATTS 75°C WITH MATTER TEMP. WITH MINDINGS PROBLEMED AND MATTER TEMP. WITH MINDIN						.2														
SERIAL NO. WINDINGS A CORRENT A COST WATTS TO KV AND LOAD LOSS (NAME) A CORRENT A COST WATTS TO KV AND LOAD LOSS (NAME) A CORRENT A COST WATTS TO KV AND LOAD LOSS (NAME) A COST WATTS TO KV AND LOAD LOSS (NAME) WATTS TO KV ANTS TO KV ANTS TO TO WATTS TO WA	eter measi	n wattme	sased o	ition are b	gula	s and reg	Losses	stated. I	Wise :	ss other	g, unies Is.	on normal rating phases in serie	E-Based of the three	EDAN(ces are the	LOSSES resistan	RRENT.	ing cu transfor	-phase	sistances, nts. For three
SERIAL NO. WINDINGS AT 1300% RATED AT 100% RATED				Kv								10 1040	01 EVC172	5	S AT 75°(N OHM	TANCE	RESIS		
VOLTAGE VOLTAGE LOSS WIMP LOAD LOSS \$ 1MP LOAD LOSS WATTS 75°C WAT			į.							<u>).)</u> <u>(</u>	TO	LOSS WATTS	CURRENT AT 100%	C		NDINGS	W		F	SERIAL NO.
TOTAL LOSS % IMP, 73°C TOTAL LOSS % IMP, 73°C TOTAL LOSS 9 REGULATION AT 75°C AVERAGE AVER	% IM					D LOSS	LOA	IMP 5°C	%	LOSS TS 75°C	LOAD			\neg		7		i		
TOTAL LOSS % IMP. 75°C		10 10 0	3,7,7,1		+							21 9711	·	_	 	5 1 J		22 A	T†	614867
TOTAL LOSS % IMP. 75°C TOTAL LOSS % IMP. 75°C TOTAL LOSS 10 PRACTICE REGULATION AT 75°C REGULATION AT 75°C REGULATION AT 75°C REGULATION AT 75°C AVERAGE GUARANTEE 1.22 1.20			<u> </u>		+	· · · · · · · · · · · ·					<u> </u>		 				<u> </u>		-	
RAGE REGULATION AT 75°C AVERAGE GUARANTEE 100% PF REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. Winding KV Amp. until constant temperature rise was reached. RISE OF WINDINGS BY RESISTANCE GUARANTEE RISE GUARANTEE RISE GUARANTEE FLUID GUARANTEE FLUID ROGING GUARANTEE FLUID ROGING GUARANTEE FLUID ROGING GUARANTEE FLUID ROGING FRISE GALLONS PER. MIN. PR APPLIED POTENTIAL TESTS (Voitage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: KV trom KV trom KV trom KV trom					1		·								1		$\neg \dagger$			
RAGE RANTÉE REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No. 5000000000000000000000000000000000000					T									\neg	T				1	
RAGE RANTÉE REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No. 3000000000000000000000000000000000000					T										T					
RAGE RANTÉE REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No. 5000000000000000000000000000000000000																				
RANTÉE REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No. SOCIO 10 20 20 20 20 20 20 20 20 20 20 20 20 20	% IMP. 7	AL LOSS	TOTA	IMP. 75°C	%	AL LOSS	TOTA	P. 75°C	% IM	LLOSS	TOTAL							•		
REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No. Winding KV Amp. until constant temperature rise was reached. RISE OF WINDINGS BY RESISTANCE TOP AMBIENT TEMP. WATER GUARANTEE FLUID RIGGING WATER OR ROOM RISE GALLONS PER. MIN. PR APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: KV from Limes rated voltage across full winding: KV from KV from KV from KV from KV from KV from INDUCED POTENTIAL Limes rated voltage across full winding: KV from INDUCED POTENTIAL								94	11.		*7.5	21200	721							RAGE
REGULATION AT 75°C AVERAGE GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. J No. SCOCCIO SE Winding KV Amp. until constant temperature rise was reached. RISE OF WINDINGS BY RESISTANCE TOP AMBIENT TEMP. GUARANTEE FLUID INGOING IDLER RISE GALLONS PER. MIN. PR GALLONS PER. MIN. PR AATER AAT								2.	,		9, 1									RANTEE
GUARANTEE PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No.	% PF			80% PF		PF	%			00% PF	100									
PERATURE RISES—Average rise in degrees C., corrected to instant of shutdown, of transformer. I No				7.94						1.82			VERAGE	9 1		°C	AT 7	LATION	REGU	
Winding Kv Amp.; Winding Kv WATER Winding Kv Amp. until constant temperature rise was reached. RISE OF WINDINGS BY RESISTANCE TOP AMBIENT TEMP. WATER GUARANTEE FLUID INGOING IDLER OR ROOM RISE GALLONS PER MIN. PR RISE WATER OR ROOM RISE GALLONS PER MIN. PR WINDING WATER OR ROOM RISE CONTROL OF THE MIN. PR WINDING VOLT RATING TEST VOLTAGE DURATION OF THE MIN SECOND CONTROL OF THE MIN													UARANTEE	C						
Winding KV Amp. Until constant temperature rise was reached. RISE OF WINDINGS BY RESISTANCE TOP AMBIENT TEMP. WATER GUARANTEE FLUID INGOING IDLER OR ROOM RISE GALLONS PER. MIN. PR JUATION TESTS WINDING VOLT RATING TEST VOLTAGE DURATION OR SECOND TO SECOND TO SECOND TEST VOLTAGE DURATION OF SECOND TEST VOLTAGE APPLIED IN KY IN SECOND TEST VOLTAGE APPLIED OF TES										ner.	ansform	hutdown, of tr	instant of s	ted to	C., correc	degrees	e rise i	-Averag	ISES-	PERATURE
Windling Kv		5 :	follows	loaded as	ınd	inected ar	s con	winding	with				9 7					<u>رو ده رستا</u> دو چو	ب زه دل	No
RISE OF WINDINGS BY RESISTANCE GUARANTEE GUARANTEE FLUID RISE WATER OR ROOM RISE GALLONS PER. MIN. PR JUNION TESTS WINDING WINDING WOLT RATING APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: Kv from	A		<u> </u>	<u> </u>	_									ن ن د				1111		_Winding
GUARANTEE FLUID INGOING IDLER OR ROOM RISE GALLONS PER. MIN. PR JUANTON TESTS WINDING VOLT RATING TEST VOLTAGE APPLIED IN KV IN SECON APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: KV from						d.	reache													Winding
APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL (Voltage POTENTIAL (Voltage applied between each winding and all other windings connected to core and ground.)						ļ			YT T					TANCE	BY RESIS	DINGS	OF WI	RISE		• 1
JEATION TESTS WINDING WINDING VOLT RATING APPLIED IN KV IN SECON APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: KV from	POUNDS				SE	RZS			1 0				RANTEE	GUA		ļ		1		4.75 I
APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: Kv from		5	3 4		77.	575		241.77	1 ;			47.8	5 15						4.1	4
APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: Kv from					_			جي ۾ ج			· · · · · · · · · · · · · · · · · · ·	9 Sec.	5.5							
APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Times rated voltage across full winding: Kv tram														T						
APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: Kv from			שם					G	ATIN	VOLT R	,	/INDING	w						7\$	LATION TES
APPLIED POTENTIAL TESTS (Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL Limes rated voltage across full winding: Kv from		ت ب			5	250		٠. ١	886	115		11.824	P211-							
(Voltage applied between each winding and all other windings connected to core and ground.) INDUCED POTENTIAL times rated voltage across full winding: Kv from								- 1		,		•				TESTS	TENTIA	ED POT	APPLI	
other windings connected to core and ground.) INDUCED POTENTIAL times rated voltage across full winding: Kv from		ن ن			7	19		1.	14	·/.		5 5 862	E							Malhana
Prom						•				,		7467774	10,765			-				-
Prop	L.F.						<u> </u>	البحجيد	ilae-		eroes 4:	ested voltage a	· • · · · · · · · · · · · · · · · · · ·		(e./::	T =		NTIAI	POTE	INDUCED
TEST Line terminal to ground; atcycles per second for	——Kv ——cycles			V 175M			cond (-		ervaa Ti	rated voltage a		around		$\overline{}$			EST	
									بحنضنت							سسوبيب	-			RKS
THESE TEMPERATURE TESTS WERE TAKEN FROM A DUTLICATE	ا داده ب		FLIC.	ا ناك	F	₹6.4	Fa	N	4. 5. E	13	بالسطة أأيه	CTS 6/3	128	J & C	of the faction of the	i in and i	, F.	14 2 3		74.
POWER AND STOCK ORDER 1-U-3633								3	i),	L 247		<i>ES</i> .	000	٠,,	<				$\overline{}$	
BUILT ON STOCK DRIER 1-U-3683								•.′	د د	- = :	- U	Promoting (د. سناه پ	<u>_</u>	STO		ು ಕ.	LT	なし	

I hereby certify that this is a true report based on factory tests made in accordance with the latest Transformer Test Code C57.2 of the American Standards Association; and that each transformer withstood the above insulation tests.



From : M.J.Holak
WIN : 245-5252
Data : 9/27/70
Subject: UTF 926

to: Mr. H.J.Lowenberg, Mgr. Utica-Syracuse Apparatus Repair

Bristol Laboratories 1000/12500 KVA 115000-4160Y Transformer Serial 5066887

- 1. Bottom oil sample 31KV as reported
- 2. Brigge megger --

H-L grd 820 megohms L-H grd 600 " H-L 10,000 "

2. Motor driven megger- 1000 v l min. readings

H-L grd 450 megohms L-H grd 1000 " H-L 6000 "

3. Capacitance

(H-L)grd 0.88% H-L grd 0.9% L-H grd 0.68%

4. Hi-potential test (60hertz)

L - g 19kv for 60 secs. H - g 230kv for 60 secs.

5. Induced potential test;

2 times rated voltage across low voltage winding for 7200 cycles (180 cycles for 40 sec.)

Above tests performed on Sat. 9/26/70 and witnessed by Mr. George Hay of Bristol Labs.

M.J.Holak

REPORT OF TRANSFORMER TESTS

WESTINGHOUSE



ELECTRIC CORPORATION

		LLADS .										
Date of Test_	7-27-52	Custo	mer's	B Order	No. C.O. 67	7893:	G.O.		<u>4</u> 00	S.O. No	1-U-36	53
Type SL Cor	e Phase	Three	•	Cycles	60	nsulating Fl		<u> </u>	Spec.	5 36 865		
	·	11500			_Volts _	4160		Volt	s			Volts
Windings (1)		10000/				10000/1	2500	Kva	(3)			Kva
(1) 112	125-109	9250 <u>-10</u> 6	<u> 375</u>	-103 <u>5</u> 0	O F.C. De	l ta						<u> </u>
RESISTANCES, I												
based on watt	meter me	asurement	s. Fo	r three-	phase transfor	mers the re			of the thr	ee phases	in series	3,
					İ	1	115			Kv		Kv
	RI	ESISTANCE IN	OHMS	AT 75°C	% EXCITE	NO LOAD	To4.		то	Kv	то	Kv
SERIAL NO					AT 100% RATED	NO LOAD LOSS WATTS AT 100% RATED VOLTAGE	100	00Kva		Kva		Kva
	(1)	(2	1	/2\	VOLTAGE	VOLTAGE	LOAD LOSS	% IMP	LOAD LOSS	% IMP	LOAD LOS	SS % IMP
	(1)	\	,	(3)			LOAD LOSS WATTS 75°C	75°C	LOAD LOSS WATTS 75°C	% IMP 75°C	WATTS 75°	SS % IMP C 75°C
5066842	34.8	3 -01:	197		<u> </u>	18700	54510	11.79	`			
						ļ	- · · · · · · · · · · · · · · · · · · ·			ļ		
						 		 				
<u> </u>	- 			 		 						
				ļ		 		 		 		
				l		-	TOTAL LOSS	WATTS 75°C	TOTAL LOSS	WATTS 75°C	TOTAL LOS	S WATTS 75°C
					500	18700	 		TOTAL EUSS	HAII3 /3 C	TOTAL EUS	3 MATTS 73 C
AVERAGE				· · · · · · · · · · · · · · · · · · ·	.500	18700	73210	11.79		ļ	-	
GUARANTEE						<u> </u>	100% PF	12	% PF	80% PF	 	% PF
•	REGULAT	ION AT 75	•e		41/25405		1.24			7.92		70 + 1
· ·			•		AVERAGE		7.63	8		1006	<u>' </u>	
- MPERATURE	IREC.AV	enege plee	in de	areas C	GUARANT		utdown of	transform	Ar	<u> </u>		
Serial No.	5066842	}		· g. cos o.			-with wind			eded en fol	lows:	
(1) 103.	5	_Kv		55。		Amp. (2)	4.16	Kv		1388 I		Ams.
(8)										ched.		
												
<u> -</u>		OF WINDI	NGS			FLUID	INGOING	IDLE		100	LLONS	POUNDS
Load	(1)	(2)		(3)	GUARANTEE	RISE	WATER	OR RO	OM RIS	E PE	R MIN.	PRESSURE
100%	52.0	52.3			55	47.8		24.	7 Self	-Cooled		
125%	53.3	53.2	\bot		55	38.0		33.	5 Air	Blast		
		<u> </u>					ander ve and					
INSULATION TES	TS .					VOLT	FGE RATING	3 OF		OLTAGE D IN KV		ON OF TEST
		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·							110	
	APPLIED	POTENT	IAL	TESTS	,		115000		23	0	(60
(Voltage	applied	between e	ach v	winding	and all	•	4160		1	.9	•	60
other w	indings co	nnected t	o cor	e and g	round.)							
INDUCED				Two	<u> </u>	voltage at	ross full wit	nding:		Kv from	· · · · · · · · · · · · · · · · · · ·	Kv
	rest		Line		l to ground; a	7.90			second fo	70	00	cycles.
REMARKS							. //··· ·					

	I hereby certify that this is a true i	report based on factory tests made in accord	ance with the latest Transformer Test Code C57.2 of the
	American Standards Association; and	that each transformer withstood the above	insulation tests.
\	Signed R.D. Morris	Date October 20, 1952	ApprovedApproved
1	\ · · • · · · · · · · · · · · · · · · ·	1 9	TO A MOTOR MADE A COLOR

REPORT	0F	T	31	\$

APPARATUS Bristol Labs Incorporated Westinghouse SY-16400 GENERAL ORDER NO. 1-U-3633	
Type SL Core Form Power Transformer 1-U-3633	
APPARATUS SHOP ORDER NO. 1-0-0000	
10000/12500 Kva, 115000/4160 Volts, Three Phase, 60 Cycles	

Additional Test Data

Iron Loss Data at 110% Voltage

 Serial
 % Exciting Current
 Watts Loss

 5066842
 .991
 23700

Serial 5066842 successfully withstood Westinghouse Quality Control Impulse Tests.

Hot Spot Indicator Readings

Serial	100%	125%
5066842	87.8	95.5

THE ABOVE IS A TRUE AND CORRECT RECORD OF DATA OBTAINED FROM TESTS AT THE WORKS OF WESTINGHOUSE ELECTRIC CORPORATION

04050	2		2	21250
PAGES		OF		PAGES

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 1

NAME	PLA	TE	& 1	OCA	TION	DAT	Δ

		4160	Radiators 27	6' X 2"	Ground	YES
5063208	Low Voltage	480	No. Fans		Outside	YES
	Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
5.5%	Gas Headspace	YES	Location	#8 ODS	Platform	NO
2500	Water Cooled	NO	Environment	DIRTY	Pole	NO
BST Top/Bottom	Hose	50'	Gal./Type	850	Roof	NO
	5.5% 2500 BST	Phase/Cycle 5.5% Gas Headspace 2500 Water Cooled BST Top/Bottom Hose	Phase/Cycle 3/60 5.5% Gas Headspace YES 2500 Water Cooled NO BST Top/Bottom Hose 50'	Phase/Cycle 3/60 Bushings Top/Side 5.5% Gas Headspace YES Location 2500 Water Cooled NO Environment BST Top/Bottom Hose 50 Gal./Type	Phase/Cycle 3/60 Bushings Top/Side ENCLOSED 5.5% Gas Headspace YES Location #8 0DS 2500 Water Cooled NO Environment D1RTY BST Top/Bottom Hose 501 Gal./Type 850	Phase/Cycle 3/60 Top/Side ENCLOSED Inside 5.5% Gas Headspace YES Location #8 ODS Platform 2500 Water Cooled NO Environment DIRTY Pole BST Top/Bottom Hose 50 Gal./Type 850 Roof

FIELD INSPECTION DATA

	T	T	EST	TRANC	FORMER	, , , , , , , , , , , , , , , , , , , 	TION	T	T		
Date	P.O. No.		Humidity		Temp.	Level	Bush.	Paint	Leaks	Quality Factor	Recommende Service
1/78				NG	28	NG					
0/79				NG	28	NG					
2/80	64246	34 ⁰	68%	NO GA	39°	ок	ENCL.	GOOD	NONE	GOOD	INSP. 12/8
/8	92785	72 ⁰	52%	NO GA	00	LOW	ENCL.	DIRTY	BTM.VALVE	FAIR	FIELD SERVI
/83	R07752	70 ⁰	80%	NO GA	24 ⁰	S.LOW	ENCL.	DIRTY	BTM. VALVE	FAIR	FIELD SERVICE
										<u> </u>	
		+								-	
						<u> </u>			· · · · · · · · · · · · · · · · · · ·		
				·				<u> </u>			

	LIQUID TEST DATA													
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service			
1/78	2.0	CLEAR	31.6		.03	40			9 PPM					
0/79	2.0	CLEAR	30.7		.05	30								
2/80	2.0	CLEAR	31.9		.04	45				GOOD	TEST 12/81			
/82	2.0	CLEAR	32.2		.06	50				GOOD	TEST 1/83			
'83	1.5	S.TRACE	32.9		.06	39				BORDERLINE	RE-REFINE			
														
<u> </u>														

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 2

Make/Rewind	West	High Voltage	4160 delta	No. Radiators	26S X 4E 3'W X 4'H	Ground	YES
Serial No.	805009	Low Voltage	480 delta	No. Fans	NONE	Outside	NO
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	YES
mpedance		Gas Headspace	YES	Location	#8 MR	Platform	NO
<va< td=""><td>750</td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>	750	Water Cooled	NO	Environment	CLEAN	Pole	NO
ILTER Jaives	TST/BST/HANDI Top/Bottom	OLE Hose	PORTABLE	Gal./Type	287 A	Roof	NO

FIELD INSPECTION DATA

	T				*****	, ,,,,,,, <u> </u>	OLION D	חות			•
Date	DO No				FORMER					Quality	Recommende
Date	P.O. No.	l lemp.	Humidity	Press	Temp.	Level	Bush.	Paint	Leaks	Factor	Service
1/78					50	NG					
10/79					50	NG					
12/80	64246	340	68%	NO GA	530	0K	ENCL.	ок	NONE	GOOD	INSP. 12/8
1/	92785	72°	52%	NO GA	35 ⁰	0K	ENCL.	GOOD	NONE	GOOD	INSP. 1/83
<u>/83</u>	R07752	70 ⁰	80%	NO GA	39 ⁰	S.LOW	ENCL.	ОК	SAMPLE TAP	FAIR	FIELD SERVICE
											·
			ancaka ca								
_											

						Lit	QUID TEST DATA	١			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU		Quality Factor	Recommende Service
11/78	Yellow	CLEAR			3615	30	1.520				
10/79	Yellow	CLEAR			.06	30	1.520				
2/80	STRAW	CLEAR			.035	35	1.550			GOOD	TEST 12/8
1/82	s	CLEAR			.065	42			•	BORDERLINE	TEST 1/83
/83	LS	CLEAR			.010	44				GOOD	TEST 5/84
						-3					
		S									

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 3

NAME	PLA	TE	& 1	LOCA	ATION	DATA
------	-----	----	-----	------	-------	------

West	High Voltage	4160 delta	No. Radiators	265 X 4E 3"W X 4'H	Ground	YES
805010	Low Voltage	480 delta	No. Fans	NONE	Outside	NO
	Phase/Cycle	3/60	Bushings Top/Side		Inside	YES
	Gas Headspace	YES	Location	#8 MR	Platform	NO
750	Water Cooled	NO	Environment	CLEAN	Pole	NO
TST/BST/HANDH Top/Bottom	OLE Hose	PORTABLE	Gal./Type	287 A	Roof	NO
	750 TST/BST/HANDH	805010 Low Voltage Phase/Cycle Gas Headspace 750 Water Cooled TST/BST/HANDHOLE Top/Bottom Hose	805010 Low Voltage 480 delta Phase/Cycle 3/60 Gas Headspace YES 750 Water Cooled NO TST/BST/HANDHOLE Top/Bottom Hose PORTABLE	West High Voltage 4160 delta Radiators 805010 Low Voltage 480 delta No. Fans Phase/Cycle 3/60 Bushings Top/Side Gas Headspace YES Location 750 Water Cooled NO Environment TST/BST/HANDHOLE Top/Bottom Hose PORTABLE Gal./Type	West High Voltage 4160 delta Radiators 3''W X 4'H 805010 Low Voltage 480 delta No. Fans NONE Phase/Cycle 3/60 Bushings Top/Side FNCLOSED Gas Headspace YES Location #8 MR 750 Water Cooled NO Environment CLEAN TST/BST/HANDHOLE Top/Bottom Hose PORTABLE Gal./Type 287 A	West High Voltage 4160 delta Radiators 3"W X 4"H Ground 805010 Low Voltage 480 delta No. Fans NONE Outside Phase/Cycle 3/60 Bushings Top/Side FNCLOSED Inside Gas Headspace YES Location #8 MR Platform 750 Water Cooled NO Environment CLEAN Pole TST/BST/HANDHOLE Top/Bottom Hose PORTABLE Gal./Type 287 A Roof

FIELD INSPECTION DATA

		TI	ST	TRANS	FORMER	Oil		Γ -	T	O Un	T
Date	P.O. No.		Humidity		Temp.	Level	Bush.	Paint	Leaks	Quality Factor	Recommende Service
11/78					50	NG					
0/79					50	NG					
12/80	64246	340	68%	NO GA	540	ΟK	ENCL.	ок	NONE	GOOD	INSP. 12/8
1/	92785	72°	52%	NO GA	40°	LOW	ENCL.	GOOD	NONE	FAIR	ADD ASKARE
/83	R07752	70 ⁰	80%	NO GA	41 ⁰	LOW	ENCL.	ок	NONE	FAIR	ADD ASKAREL
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	T-)			 							
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, . <u></u>		,			LI(QUID TEST DATA				
Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU		Quality Factor	Recommende Service
Yellow	CLEAR			.10	28	1.520				
Yellow	CLEAR			.10	28	1.520				
STRAW	CLEAR			.080	15	1.538			POOR	FILTER
FILTER	ED ASKA	REL							GOOD	TEST 12/81
S	CLEAR			.125	27				BORDERLINE	TEST 1/83
LS	CLEAR			.025	30				G000	TEST 5/84
	Yellow Yellow STRAW FILTER S	Yellow CLEAR Yellow CLEAR STRAW CLEAR FILTERED ASKA S CLEAR	Yellow CLEAR Yellow CLEAR STRAW CLEAR FILTERED ASKAREL S CLEAR	Yellow CLEAR Yellow CLEAR STRAW CLEAR FILTERED ASKAREL S CLEAR	Yellow CLEAR .10 Yellow CLEAR .10 STRAW CLEAR .080 FILTERED ASKAREL S CLEAR .125	Color Sludge I.F.T. S.R. Neut# Diel. Yellow CLEAR .10 28 Yellow CLEAR .10 28 STRAW CLEAR .080 15 FILTERED ASKAREL .125 27	Color Sludge I.F.T. S.R. Neut# Diel. Specific Gravity Yellow CLEAR .10 28 1.520 Yellow CLEAR .10 28 1.520 STRAW CLEAR .080 15 1.538 FILTERED ASKAREL .125 27	Yellow CLEAR .10 28 1.520 Yellow CLEAR .10 28 1.520 STRAW CLEAR .080 15 1.538 FILTERED ASKAREL .125 27	Color Sludge I.F.T. S.R. Neut# Diel. Specific Gravity SSU Yellow CLEAR .10 28 1.520	Color Sludge I.F.T. S.R. Neut# Diel. Specific Gravity SSU Quality Factor Yellow CLEAR .10 28 1.520

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 7

NAME	PLAT	E &	LOCA	TIO	N D	ATA

Make/Rewind	GE	High Voltage	2400/4160y	No. Radiators	NONE	Ground	YES
Serial No.	7328364	Low Voltage	240/120	No. Fans	NONE	Outside	NO
Number	3492	Phase/Cycle	1/60	Bushings Top/Side	2/2	Inside	YES
mpedance	4.4	Gas Headspace	YES	Location	bldg 1	Platform	NO
KVÁ	250	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	TC/BST Top/Bottom	Hose	150'	Gal./Type	169	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil	1			Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78					35	NG					
10/79					35	NG					
<u>12/8c</u>	64246	340	68%	NO GA		οĸ	DUSTY	DUSTY	NONE	GOOD	INSP. 12/8
1/	92785	720	52%	NO GA	35 ⁰	ОК	DUSTY	DUSTY	SEE QUOTE	FAIR	REPAIR LEA
/83	R07752	70 ⁰	80%	NO GA	40°	ОК	V.DUSTY	DUSTY	see quote	FAIR	FIELD SERVICE
				·							
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						-					

LIQUID TEST DATA

							GOID 1521 DATA				
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommended Service
:11/78	3.0	CLEAR	28.6		.11	33					
10/79	3.0	CLEAR	27.3		.12	40				 	•
12/80	2.5	CLEAR	29.7		.06	38				GOOD	TEST 12/81
1/81	 						P.O.#64246		200 PPM		
1/82	2.0	CLEAR	30.3		. 08	52				GOOD	TEST 1/83
/83	2.0	CLEAR	31.2		.08	41				BORDERLINE	RE-REFINE
_											
											

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE:

New York

TEST NO.:

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NAME PLATE & LOCATION DATA

Make/Rewind	GE	High Voltage	2400/4160y	No. Radiators	NONE	Ground	YES
Serial No.	7328362	Low Voltage	240/120	No. Fans	NONE	Outside	NO
Inventory Number		Phase/Cycle	1/60	Bushings Top/Side	2/2	Inside	YES
Impedance	4.4	Gas Headspace	YES	Location	bldg 1	Platform	NO
KVA	250	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	TC/BST Top/Bottom	Hose	150'	Gal./Type	169	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil		T		Quality	Recommende
Date	P.O. No.	Temp.	Humidity	Press	Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78					35	NG					
10/79					35	NG					
12/80	64246	340	68%	NO GA	40 ⁰	ОК	DUSTY		MINOR-LV BUS	I FAIR	INSP. 12/8
1/	92785	72°	52%	NO GA	35 ⁰	HIGH	DUSTY	DUSTY	LV BUSH. BTM.VALVE	FAIR	REPAIR LEA
5/83	R07752	70 ⁰	80%	NO GA	44 ⁰	l"HIGH	V.DUSTY	DUSTY	LV BUSHING	FAIR	FIELD SERVICE
											

LIQUID TEST DATA

Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
*11/78	3.0	CLEAR	30.1		.05	42					
*10/79	3.0	CLEAR	30.8		.08						•
12/80	2.0	CLEAR	30.9		.04	45				GOOD	TEST 12/81
1/81					, ,		P.O.#64246		100 PPM		
1/82	2.0	CLEAR	31.2		.04	52				GOOD	TEST 1/83
5 /83	2.0	CLEAR	31.9		.04	41				G000	TEST 5/84
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Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.:

10

NAME	PL#	۱T	Ε	&	L0	CA	TI	0	N	D	A'	T.	A
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Make/Rewind	West	Wish Malassa	146	No.	198 X 10E		7
	West	High Voltage	4160	Radiators	2''D X 5'H	Ground	YES
Serial No.	5064132	Low Voltage	480	No. Fans	NONE	Outside	YES
Inventory				Bushings		*	
Number		Phase/Cycle	3/60	Top/Side	ENCLOSED	Inside	NO
mpedance	5.2	Gas Headspace	YES	Location	#9 ODS	Platform	NO
KVA	1500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST Top/Bottom	Hose	25'	Gal./Type	686	Roof	NO

FIELD INSPECTION DATA

		TE	EST	TRANS	FORMER	Oil	T		T	Quality	Bassand
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush,	Paint	Leaks	Factor	Recommend Service
11/78	·			2 1	19	NG					
10/79				24	19	NG			9		
12/80	64246	34°	68%	24	16 ⁰	ОК	ENCL.	GOOD	NONE	GOOD	INSP. 12/
<u>1/</u> ` '	92785	72°	52%	CAN'T READ	5°	LOW	ENCL.	GOOD	BTM.VALVE	FAIR	FIELD SERVI
/83	R07752	65 ⁰	55%	+21	24 ⁰	S.LOW	ENCL.	CCCCC	TAP CHANGER	FAIR	FIELD SERVI
								·			
											
					}						

LIDUID TEST DATA

	LIQUID TEST DATA													
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality	Recommende Service			
<u>*11/78</u>	2.0	CLEAR	34.0		.03	50								
10/79	2.0	CLEAR	34.5	· · · · ·	.04	50					•			
12/80	1.5	CLEAR	35.1		.02	38				GOOD	TEST 12/81			
1/81							P.O.#64246		31 PPM					
1/82	1.5	CLEAR	35.1	-	.02	51				GOOD	TEST 1/83			
5/83	1.5	CLEAR	31.9		.03	35.5				GOOD	TEST 5/84			
														
														
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel,-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.:

Make/Rewind	West	High Voltage		No. Radiators	NONE	Ground	YES
Serial No.	5064132	Low Voltage		No. Fans	NONE	Outside	YES
Inventory Number	Swth for #10	Phase/Cycle		Bushings Top/Side	NONE	Inside	NO
Impedance		Gas Headspace	YES	Location	#90DS	Platform	NO
KVA		Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST Top/Bottom	Hose	25'	Gal./Type	22	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil Level			I	Quality	Recommende
Date	P.O. No.	Temp.	Humidity	Press	Temp.		Bush.	Paint	Leaks	Factor	Service
11/78						NG			S @ side		
÷10/79						NG			S@side		
12/80	64246	340	68%			OK		GOOD	MINOR @LEV.G	A. GOOD	REPAIR LEA
2/1	71944								REPAIRED	GOOD	INSP. 12/8
1/82	92785	72°	52%	NO GA	NO GA	LOW		GOOD	MIN.@LEV.GA	FAIR	FIELD SERVI
5 /83	R07752	65 ⁰	55%	NO GA	NO GA	CAN'T READ		FAIR	LEVEL GAUGE	FAIR	FIELD SERVICE
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				<u> </u>							

LIQUID TEST DATA

							GOID LEST DATA	1			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
:11/78	1.5	CLEAR	27.7		.06	28					
10/79	1.0	CLEAR	29.0		.03	30					•
12/80	1.0	CLEAR	28.1		.04	39				GOOD	TEST 12/81
1/82	1.0	CLEAR	27.8		.06	43			<1 PPM	GOOD	TEST 1/83
/83	1.5	CLEAR	26.1		.04	27.5				G000	TEST 5/84
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				<u> </u>							
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 12

NAME PLATE & LOCATION	ם א	ATA	١
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Make/Rewind	West	High Voltage	4160	No. Radiators	195 X 10E 2"D X 5'H	Ground	YES
	nest.	- Contrage	4160	(vadiatora	201311	Ground	163
Serial No.	5064133	Low Voltage	480	No. Fans	NONE	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
mpedance	5.2	Gas Headspace	YES	Location	#9 ODS	Platform	NO
KVA	1500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST Top/Bottom	Hose	25'	Gal./Type	686	Roof	NO

FIELD INSPECTION DATA

		TI	EST	TRANS	FORMER		1	T -			
Date	P.O. No.		Humidity		Temp.	Level	Bush.	Paint	Leaks	Quality Factor	Recommende Service
11/78				-1/2	18	NG			S @tap Ch.		
10/79	····			- <u>1</u>	18	NG			S @ tap Ch.		
12/80	64246	340	68%	-1/2	15	ΟK	ENCL.	GOOD	MINOR-TAP CH		INSP.12/8
1/	92785	72 ⁰	52%	Ō	00	LOW	ENCL.	GOOD	TAP CHANGER	FAIR	FIELD SERVI
5/83	R07752	65 ⁰	55%	-1 2	20 ⁰	OΚ	ENCL.	GOOD	TAP CHANGER	FAIR	FIELD SERVICE
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LIQUID TEST DATA

	LIQUID TEST DATA													
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service			
11/78	1.0	CLEAR	37.6	ļ	.02	45			33 PPM					
10/79	1.0	CLEAR	37.8		-03	30					•			
12/80	1.0	CLEAR	38.5		.02	46				GOOD	TEST 12/81			
1/82	1.0	CLEAR	38.3		.02	42		·		GOOD	TEST 1/83			
<u>'83</u>	1.5	TR.H20	36.4	: 	.02	53.5				G000	TEST 5/84			
						 .								
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 13

NAME PLATE & LOCATION DATA

Make/Rewind	west	High Voltage		No. Radiators	NONE	Ground	YES
Serial No.	5064133	Low Voltage		No. Fans	NONE	Outside	YES
Inventory Number	Swth for #12	Phase/Cycle		Bushings Top/Side	NONE	Inside	NO
mpedance		Gas Headspace	NO	Location	#90DS	Platform	NO
KVA		Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST Top/Bottom	Hose	25'	Gal./Type	22 e	Roof	NO

FIELD INSPECTION DATA

		T	EST	TRANS	FORMER		JIION D	1			
Date	P.O. No.		Humidity		Temp.	Level	Bush.	Paint	Leaks	Quality Factor	Recommende: Service
:11/78						Illeg					
10/79						llea					
12/80	64246	34 ⁰	68%	NO GA	NO GA			ОК	NONE	FAIR	FIELD SERVIC
2/8	71944					ОК				GOOD	INSP. 12/8
1/82	92785	72 ⁰	52%	NO GA	NO GA	LOW		ОК	OIL LEVEL GAUGE	FAIR	FIELD SERVI
5/83	R07752	65 ⁰	55%	NO GA	NO GA			FAIR	LEVEL GAUGE	FAIR	FIELD SERVICE
·											
											,

	LIQUID TEST DATA													
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommended Service			
11/78	•5	CLEAR	35.4		.04	30								
10/79	_5	CLEAR	33		.03	27					•			
12/80	.5	CLEAR	32.6		.03	28				GOOD	TEST 12/81			
1/82	.5	CLEAR	32.5		.03	42			1 PPM	GOOD	TEST 1/83			
33	1.0	CLEAR	30.1	<u> </u>	.03	39				G000	TEST 5/84			
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Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 14

NAME	PL	ATE	. &	LOC	ATI	DN	DA	TA
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Make/Rewind	West	High Voltage	4160	No. Radiators	198 X 10E 2"D X 5'H	Ground	YES
Serial No.	5064131	Low Voltage	480	No. Fans	NONE	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
mpedance	5.2	Gas Headspace	YES	Location	#9 ODS	Platform	NO
KVA	1500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST Top/Bottom	Hose	75'	Gal./Type	686	Roof	NO

FIELD INSPECTION DATA

		TI	EST	TRANS	FORMER	Oil	1			Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78	3		<u> </u>	0	25	L			S @ tap Ch.		
10/79				0	25	L			S @ tap Ch.		
12/80	64246	340	68%	0	20 ^O	LOW	ENCL.	GOOD	SL.@TAP CH.	FAIR	FIELD SERVI
2/8	71944	LEAK TEST	ED.	+1 1		ADDED 15GAL			REPAIRED	GOOD	INSP. 12/8
/82	92785	72°	52%	0	5°	LOW	ENCL.	GOOD	BTM . VALVE	FAIR	FIELD SERVI
5/83	R07752	65 ⁰	55%	-2 1	20 ⁰	ОК	ENCL.	FAIR	NONE	FAIR	INSP. 5/84
											
											

LIQUID TEST DATA

		T	1	r	T - 1		TOTAL BALLA	·		·	
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
11/78	.75	CLEAR	32.1		.03	44					
10/79	•75	CLEAR	34.0		.03	30					•
12/80	.5	CLEAR	34.5		.02	43				GOOD	TEST 12/81
1/81							P.O.#64246		<1 PPM		
3/82	1.0	CLEAR	35.5	<u>.</u>	.03	43				GOOD	TEST 1/83
/83	1.0	CLEAR	31.5		.02	32				G000	TEST 5/84
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Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 15

	NAME	PLA'	TE &	LOCA	NOIT	DATA
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Make/Rewind	West	High Voltage		No. Radiators	NONE	Ground	YES
Serial No.	5064101	Low Voltage		No. Fans	NONE	Outside	YFS
nventory Number	Swth for #14	Phase/Cycle		Bushings Top/Side	NONE	Inside	NO
mpedance		Gas Headspace	YES	Location	#90DS	Platform	NO
<va< td=""><td></td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>		Water Cooled	NO	Environment	CLEAN	Pole	NO
ILTER /alves	BST Top/Bottom	Hose	751	Gal./Type	22	Roof	NO

FIELD INSPECTION DATA

		TE	EST	TRANS	FORMER	Oil				Quality	Recommende
Date	P.O. No.	Temp.	Humidity	Press	Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78						Illeg			S @ Lv G		
10/79						llleg			Salva		
12/80	64246	34°	68%	NO GA	NO GA	llleg		OK	MIN.@ LV.GA.	FAIR FI	ELD SERVICE
2/8	71944					ок		}	REPAIRED	GOOD	INSP. 12/8
1/82	92785	72 ⁰	52%	NO GA	NO GA	LOW		OK	LEVEL GA.	FAIR	FIELD SERVI
5 /83	R07752	65 ⁰	55%	NO GA	NO GA	CAN'T READ		FAIR	LEVEL GAUGE	FAIR	FIELD SERVICE
						<u> </u>					

						LIC	QUID TEST DATA				
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommended Service
11/78	1.0	CLEAR	27.1		.06	35			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
10/79	1.0	CLEAR	25.3		.06	32					•
2/80	1.0	CLEAR	27.7		.04	32				GOOD	TEST 12/81
3/82	1.0	CLEAR	27.5		. 06	49			∠1 PPM	GOOD	TEST 1/83
/83	1.0	CLEAR	25.2		.04	35				G00D	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 16

N	lΑ	M	E	P	L	A	1	E	&	L	0	CA	I	1	0	N	D	A	T	A	•

Make/Rewind	West insuld	High Voltage	4160	No. Radiators	15S X 14E 3'W X 4'H	Ground	ves.
Serial No.	YDR78371	Low Voltage	480	No. Fans	NONE	Outside	YES
Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
mpedance	5.4	Gas Headspace	YES	Location	#90DS	Platform	NO
<va< td=""><td>1500</td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>	1500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	Top/Bottom	Hose	75'	Gal./Type	311	Roof	NO

FIELD INSPECTION DATA

		TE	EST	TRANS	FORMER	Oil	T			Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78			ļ	+11/2	25	NG					
10/79				+13	25	NG					
12/80	64246	35°	68%	+1 3/	+ 20 ⁰	ОК	ENCL.	GOOD	NONE	GOOD	INSP. 12/8
<u>/8</u>	32785	72 ⁰	52%	+1	15 ⁰	ок	ENCL.	600D	NONE	GOOD	INSP. 1/83
:/83	R07752	65 ⁰	55%	+2	30 ⁰	ακ	ENCL.	G000	NONE	GOOD	INSP. 5/84
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					LI	QUID TEST DATA	1			
Color	Sludge	1.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
3.0	Clear	35.7		.06	28					
3.0	Clear	35.2		.05	40					•
3.0	CLEAR	35.7		.02	43				GOOD	TEST 12/81
3.0	CLEAR	35.4		.05	40			79 PPM	GOOD	TEST 1/83
3.0	CLEAR	34.0		.04	47				GOOD	TEST 5/84
<u> </u>										
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	3.0 3.0 3.0 3.0	3.0 Clear 3.0 Clear 3.0 CLEAR 3.0 CLEAR	3.0 Clear 35.7 3.0 Clear 35.2 3.0 CLEAR 35.7 3.0 CLEAR 35.4	3.0 Clear 35.7 3.0 Clear 35.2 3.0 CLEAR 35.7 3.0 CLEAR 35.4	3.0 Clear 35.7 .06 3.0 Clear 35.2 .05 3.0 CLEAR 35.7 .02 3.0 CLEAR 35.4 .05	Color Sludge I.F.T. S.R. Neut# Diel. 3.0 Clear 35.7 .06 28 3.0 Clear 35.2 .05 \(\begin{subarray}{c} \beta_0 \) 3.0 CLEAR 35.7 .02 43 3.0 CLEAR 35.4 .05 40	Color Sludge I.F.T. S.R. Neut# Diel. Specific Gravity 3.0 Clear 35.7 .06 28 3.0 Clear 35.2 .05 li0 3.0 CLEAR 35.7 .02 43 3.0 CLEAR 35.4 .05 40	3.0 Clear 35.7 .06 28	Color Sludge I.F.T. S.R. Neut# Diel. Specific Gravity SSU PCB CONTENT 3.0 Clear 35.7 .06 28	Color Sludge I.F.T. S.R. Neut# Diel. Specific Gravity SSU PCB CONTENT Quality Factor 3.0 Clear 35.7 .06 28 <

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse STATE: New York

TEST NO.: 17

Make/Rewind	West	High Voltage		No. Radiators	NONE	Ground	YES
Serial No.	YDR 78371	Low Voltage		No. Fans	NONE	Outside	YES
nventory Number	Sw Gear #16	Phase/Cycle		Bushings Top/Side	NONE	Inside	NO
mpedance		Gas Headspace	YES	Location	#90D \$	Platform	NO
KVA		Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	Top/Bottom	Hose	75'	Gal./Type	15E	Roof	NO

		TE	ST	TRANS	FORMER		CTION D		1	Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78						NG					
10/79			<u> </u>			NG					
12/80	64246	340	68%	NO GA	NO GA	LOW		GOOD	NONE	FAIR	ADD OIL
2/8	71944					ADDED I GAL				GOOD	INSP. 12/8
1/82	92785	72 ⁰	52%	NO GA	NO GA			GOOD	NONE	GOOD	INSP. 1/83
5/ 83	R07752	65 ⁰	55%	NO GA	NO GA	ОK		GOOD	BUSHINGS	FAIR	FIELD SERVICE
					,						
			1								

						LI(QUID TEST DATA	,	•		
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommender Service
:11/78	1.0	Clear	32.2		.03	30					
10/79	1.0	Clear	32.3		.03	25					•
12/80	1.0	CLEAR	32.3	•	.02	38				GOOD	TEST 12/81
3/82	1.0	CLEAR	31.3		.02	33			<1 PPM	GOOD	TEST 1/83
5/83	1.0	CLEAR	30.5	·	.02	44.5				G000	TEST 5/84
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A-askarel E-astimated I.F.T.-dynas/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 18

NAME PLATE & LOCATION DA	41	ŧ
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Make/Rewind	Moloney	High Voltage	4160y	No. Radiators	22S X 4E 2"D X 4'H	Ground	YES
Serial No.	798659	Low Voltage	240	No. Fans	NONE	Outside	NO
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	YES
Impedance	5.15	Gas Headspace	YES	Location	Bldg_6	Platform	NO
KVA	500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST/TST Top/Bottom	Hose	PORTABLE	Gal./Type	243A	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil			1	Quality	Recommende
Date	P.O. No.	Temp.	Humidity	Press	Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78			ļ		37	NG					
10/79					37	NG		,			
12/80	64246	34 ⁰	68%	NO GA	42	OK	ENCL.		STAINS	FAIR F	ELD SERVICE
2/8	71944	SAMP	RED LE LE TAP	PLUS (LEANEL	RATURI AREA	GAUGE OF PCB	AND SPILL	AGE	GOOD	INSP. 12/8
1/82	92785	72°	52%	NO GA	300	LOW	ENCL.	FAIR	SAMPLE TAP	FAIR	FIELD SERVI
5/83	R07752	70 ⁰	80%	NO GA	40 ⁰	LOW	ENCL.	DUSTY	SAMPLE TAP	FAIR	FIELD SERVICE
	· · · · · · · · · · · · · · · · · · ·										

						LI	UUID TEST DATA	.			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu		Quality Factor	Recommende Service
11/78	Yellow	Clear			.04	42	1.540				
10/79	Yellow	Clear			.05	35	1.540				•
12/80	STRAW	CLEAR			.030	40	1.547			GOOD	TEST 12/81
1/82	S	CLEAR			.045	49				GOOD	TEST 1/83
5/83	<u>S</u>	S.TRACE			.030	42				G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 19

NAME PLATE & LOCATION DATA

Make/Rewind	West	High Voltage	4160	No. Radiators	8S X 10E 2"D X 4'H	Ground	YES
Serial No.	5066840	Low Voltage	240	No. Fans	NONE	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
Impedance	5.6	Gas Headspace	YES	Location	#23	Platform	NO
KVA	750	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST Top/Bottom	Hose	PORTABLE	Gal./Type	405	Roof	NO

FIELD INSPECTION DATA

		T	EST	TRANS	FORMER	Oil	1	T		Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
<u>*11/78</u>				-1/2	18	NG			Gen. @ botto		
÷10/79				-1	18	NG			Gen. @ hotto		
12/80	64246	34°	68%	5	13°	ОК	ОК	ОК	MINOR @ BUSH.	FAIR	INSP. 12/8
_1 !	92785	72 ⁰	52%	0	0	LOW	ENCL.	GOOD	BTM.VALVE	FAIR	FIELD SERVI
5/83	R07752	65 ^Ö	55%	-14	17 ⁰	ΟK	ENCL.	ОК	SEE QUOTE	FAIR	FIELD SERVICE
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Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
11/78	2.5	Clear	35		.04	30			NON DETECDED		
10/79	2.5	Clear	34.6		.03	31			HON DE-LECTED		•
12/80	2.5	CLEAR	35.6		.02	42				GOOD	TEST 12/81
1/82	2.5	CLEAR	35.7		.03	51				GOOD	TEST 1/83
5/83	2.5	CLEAR	34		.02	46.5		Ţ,	10 PPM	G00D	TEST 5/84
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A-askaral E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSIUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 20

NAME	PLA	TE	& 1	LOCA	TI	ON	DATA
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Make/Rewind	West	High Voltage	4160	No. Radiators	18S X 17E 3'W X 4'H	Ground	YES
Serial No.	YAR53001	Low Voltage	480y/277	No. Fans		Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
Impedance	5.4	Gas Headspace	YES	Location	#15B	Platform	NO
KVA	3125	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST/TST Top/Bottom	Hose	PORTABLE	Gal./Type	303A	Roof	NO

FIELD INSPECTION DATA

	·	TEST		TRANSFORMER		Oil	T	T		Quality	Recommende	
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service	
÷11/78			<u></u>	-1/2	35	NG						
<u>*10/79</u>				- <u>1</u>	35	NG						
12/80	64246	34 ⁰	68%	0	35°	ок	ENCL.	GOOD	NONE	FAIR	LEAK TEST	
2/1	71944			+2	LEAK T	ESTED			NONE	GOOD	INSP. 12/8	
1/82	92785	72 ⁰	52%	-1	85°	ОК	ОК	GOOD	NONE	GOOD	INSP. 1/83	
5/83	R07752	65 ⁰	55%	+2 3/	50°	OK	ENCL.	FAIR	BTM. VALVE	FAIR	REPAIR LEAK	
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LIQUID TEST DATA

LIQUID TEST DATA											
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu		Quality Factor	Recommende Service
*11/78	P/Y	Clear	ļ		.02	50	1.500				
10/79		Clear			.025	30	1.500				•
12/80	LS	CLEAR		<u> </u>	.020	41	1.516			GOOD	TEST 12/8
1/82	LS	CLEAR			.020	41				GOOD	TEST 1/83
<u>/83</u>	LS	TRACE			.015	37.5				B000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 21

NAME PLATE & LOCATION DATA

Make/Rewind	GE	High Voltage	4160	No. Radiators	14S X 9E 3'W X 3'H	Ground	YES
Serial No.	E695466	Low Voltage	480y/277	No. Fans	NONE	Outside	NO
nventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	YES
mpedance	5.57	Gas Headspace	YES	Location	#2-0DS	Platform	NO
<va< td=""><td>750</td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>	750	Water Cooled	NO	Environment	CLEAN	Pole	NO
ILTER /alves	TST Top/Bottom	Hose	PORTABLE	Gal./Type	125A	Roof	NO

FIELD INSPECTION DATA

		TEST		TRANSFORMER		Oil	T			Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
<u>11/78</u>				+11/2	19	NG					
10/79				+1+	19	NG					
12/80	64246	340	68%	+1 1	15 ⁰	OK	ENCL.	GOOD	NONE	G005	INSP. 12/8
1/	92785	72°	52%	+2	35°	ок	ENCL.	GOOD	NONE	GOOD	INSP. 1/8
5/83	R07752	70 ⁰	80%	+1½	4C ^O	OK	ENCL.	GOOD	NONE	G000	INSP. 5/84
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	LIQUID TEST DATA											
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	Quality Factor	Recommende Service		
11/78	WW .	Clear			.02	38	1.400					
10/79	WW	Clear			.02	35	1.400			•		
12/80	WW	CLEAR			.005	47	1.418		GOOD	TEST 12/81		
1/82	WW	CLEAR			.005	47			GOOD	TEST 1/83		
5/83	-WW	CLEAR			.005	35			G00D	TEST_5/84		
	 											
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

TRAISFORMER SERVICE NC.

Oil Testing Service

:USTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO .: 25

NAME	P	L A	T	Ε	&	L	0	CA	T	1	0	N	D	A	T	A	i

Make/Rewind	West	High Voltage	115,000	No. Radiators	NONE	Ground	YES
Serial No.	1-38Y-2512	Low Voltage		No. Fans	NONE	Outside	YES
nventory Number	OCB LEFT GAST	Phase/Cycle	1/60 -	Bushings Top/SXXXX	2	Inside	NO
mpedance		Gas Headspace	YES .	Location	Main bldg E	Platform	NO
<va< td=""><td>5000 MVA</td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>	5000 MVA	Water Cooled	NO	Environment	CLEAN	Pole	NO
ILTER Valves	Top/Bottom	Hose	200 '	Gal./Type	560	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil	T			Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78											
10/79				-		_					
12/80	64246	34 ⁰	68%	NO GA	NO GA	ок	GOOD	GOOD	NONE	GOOD	INSP. 12/8
1.	92785	72 ⁰	52%	NO GA	NO GA	LOW	G00D	GOOD	NONE	FAIR	INSP. 1/83
5/83	R07752	65 ⁰	55%	NO GA	NO GA	ακ	G000	GOOD	NONE	G000	INSP. 5/84
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						LI	QUID TEST DATA	1			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommended Service
11/78	.75	Clear	32.6		.03	45					
10/79	.75	Clear	31.8		.03	40					•
12/80	5	CLEAR	33.8		.02	45				GOOD	TEST 12/81
1/82	.5	CLEAR	33.0		.02	40			4 PPM	GOOD	TEST 1/83
5/83	1.0	CLEAR	31.0		.02	43.5				G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f

TRUSFORMER SERVICE NC.

Oil Testing Service

SUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 26

NAME PLATE & LOCATION DAT

Make/Rewind	West	High Voltage	115,000	No. Radiators	NONE	Ground	YES
Serial No.	1-38Y-2512	Low Voltage		No. Fans	NONE	Outside	YES
Inventory Number	OCB CENTER	Phase/Cycle	1/60	Bushings Top/ SXX	2	Inside	NO
mpedance		Gas Headspace	YES	Location	Main bldg C	Platform	NO
<va< td=""><td></td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>		Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER √aives	Top/Bottom	Hose	200'	Gal./Type	560	Roof	NO

FIELD INSPECTION DATA

		TI	ST	TRANS	FORMER	Oil		T .		Quality	Recommended
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78									,		
10/79											
12/80	64246	340	68%	NO GA	NO GA	NO GA	GOOD	GOOD	NONE	GOOD	INSP. 12/81
1/	92785	72°	52%	NO GA	NO GA	NO GA	GOOD	GOOD	NONE	GOOD	INSP. 1/8
5/ 83	R07752	65 ⁰	55%	NO GA	NO GA	ОΚ	G000	GOOD	NONE	GOOD	INSP. 5/84
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						Lit	QUID TEST DATA	1			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommended Service
11/78	.75	Clear	33.2		.03	50			NON DETECTED		
10/79	.75	Clear	32.9		_03	30					•
12/80	.5	CLEAR	33.2		.02	49				GOOD	TEST 12/81
1/82	.5	CLEAR	33.1		.02	47				GOOD	TEST 1/83
5/83	1.0	CLEAR	31.4		.02	<i>37.</i> 5			(1 PPM)	GOOD	TEST 5/84
		 									<u> </u>
											-

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

Another company's test results

TRUSFORMER SERVICE NC.

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 27

	NAME	PL	AT	Ε	&	L	0	C	A	TI	0	N	D	A	T	A
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Make/Rewind	West	High Voltage	115,000	No. Radiators	NONE	Ground	YES
Serial No.	1-38Y-2512	Low Voltage		No. Fans	NONE	Outside	YES
Inventory	K-60 WEST			Bushings		<u> </u>	
Number	OCB WEST	Phase/Cycle	1/60	Top/Side	2	Inside	NO
mpédance		Gas Headspace	YES	Location	Main bldg W	Platform	NO
KVA		Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER			1.1.2	- 	 		110
∀alves	Top/Bottom	Hose	200	Gal./Type	560	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANSI	ORMER	Oil	T	1	I	Quality	Recommende
Date	P.O. No.	Temp,	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78											
10/79											
12/80	64246	34 ⁰	68%	NO GA	NO GA	NO GA	GOOD	GOOD	NONE	GOOD	INSP. 12/
1/	92785	72°	52%	NO GA	NO GA	NO GA	GOOD	GOOD	NONE	GOOD	INSP. 1/8
5/ 83	R07752	65 ⁰	55%	NO GA	NO GA	ОК	G000	GOOD	BTM.VALVE	FAIR	REPAIR LEAK
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						LI	QUID TEST DATA				
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommended Service
11/78	.5	Clear	32.6		.03	39					
10/79	.5	Clear	32.5		.02	45					•
2/80	.5	CLEAR	33.6		.02	47				GOOD	TEST 12/81
1/81							P.O.#64246		人1 PPM		
1/82	.5	CLEAR	33.2		.02	44				GOOD	TEST 1/83
5/83	1.0	CLEAR	31.4		.02	35				G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f

TRUSFORMER SERVICE NC.

Oil Testing Service

:USTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 28

NAME PLATE & LOCATION DATA

Make/Rewind	West insuld	High Voltage	115000	No. Radiators	245 X 30E 3'W X 7'H	Ground	YES
Serial No.	PLR-46101	Low Voltage	4160/2400	No. Fans	6	Outside	YES
nventory lumber	WEST	Phase/Cycle	3/60	Bushings Top/%)(the	6	Ińside	NO
mpedance	12.0	Gas Headspace	YES	Location	Main TB#1	Platform	NO
<va< td=""><td>12500</td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>	12500	Water Cooled	NO	Environment	CLEAN	Pole	NO
ILTER /alves	BST Top/Bottom	Hose	200'	Gal./Type	3382	Roof	NO.

FIELD INSPECTION DATA

		TI	ST	TRANS	FORMER	Oil	1				Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks		Service
11/78				-1	23	NG					
10/79				-1	23	NG					
2/80	64246	34°	28%	4	20 ⁰	ок	ΟK	GOOD	NONE	GOOD	INSP. 12/8
<u>/8</u>	92785	720	52%	-2	10 ⁰	HIGH	ОК	GOOD	BTM.VALVE	GOOD	REPAIR LEA
5/83	R07752	65 ⁰	55%	+1	34 ⁰	ок	G000	GOOD	BTM. VALVE	FAIR	REPAIR LEAK
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					·	LII	QUID TEST DATA				
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB - CONTE NT	Quality Factor	Recommended Service
:11/78	2.5	Clear	31.4		.05	43			-35 PPM		
10/79	2.5	Clear	32.8		.04	42					•
12/80	2.5	CLEAR	36.0		.02	44				GOOD	TEST 12/81
/82	2.0	CLEAR	36.9		.03	48			235	GOOD	TEST 1/83
/83	2.5	CLEAR	34.7		.03	45			Per	G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f

Another company's test results

TRANSFORMER SERVICE NC.

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 29

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Make/Rewind	West	High Voltage	115000	No. Radiators	138 X 16E 10''W X 8'H	Ground	YES
Serial No.	5066887	Low Voltage	4160y	No. Fans	NONE	Outside	YES
Number	CENTER	Phase/Cycle	3/60	Bushings 艾英英/Side	6	Inside	NO
mpedance	11.95	Gas Headspace	YES	Location	Main TB#2	Platform	NO
<va< td=""><td>12500</td><td>Water Cooled</td><td>NO</td><td>Environment</td><td>CLEAN</td><td>Pole</td><td>NO</td></va<>	12500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER /alves	Top/Bottom	Hose	200'	Gal./Type	4900	Roof	NO

FIELD INSPECTION DATA

	T						CIIUN D	AIA			
Date	P.O. No.		ST Humidity		FORMER Temp.	Oil Level	Bush.	Paint	Leaks	Quality Factor	Recommende Service
06/75				-1		NG					
10/79				-1	35	NG					
12/80	64246	340	68%	25	25 ⁰	OK	ок	ОК	NONE	GOOD	INSP. 12/8
1/	32785	72 ⁰	52%	-1	20	OK	рк	GOOD	BTM.VALVE	GOOD	REPAIR LEA
5 /83	R07752	65 ⁰	55%	+11	400	OK	G000	G000	BTM. VALVE	FAIR	REPAIR LEAK
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						LI	QUID TEST DATA	.			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommended Service
26/79	1.0	Clear	38.2		.02	50			43/34 PPM		
10/79	1.0	Clear	37.2		.02	56					•
12/80	1.0	CLEAR	36.9		.02	50+				GOOD	TEST 12/81
1/82	1.5	CLEAR	37.3		.02	52				GOOD	TEST 1/83
5/83	1.5	CLEAR	33.5		.02	48				G000	TEST 5/84
		<u> </u>									
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		<u> </u>									

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

nother company's test results

TRANSFORMER SERVICE NC.

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO .: 30

NAME	PL	AT	E &	100	TA:	ON	DA	TA
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Make/Rewind	West	High Voltage	115000	No. Radiators	138 X 16E		YES
Serial No.	5066842	Low Voltage	4160y	No. Fans	4	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/XXXe	6	Inside	NO
mpedance	11.8	Gas Headspace	YES	Location	Main TB#3	Platform	ИО
KVA	12500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	Top/Bottom	Hose	200'	Gal./Type	4900	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil				Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78			<u> </u>	0	35	NG					
10/79				0	35	NG					
12/80	64246	340	68%	-1.5	30°	ок	0K	OK	NONE	GOOD	INSP.12/81
1/	92785	72°	52%	-1	20 ⁰	рк	0K	GOOD	BTM.VALVE	GOOD	REPAIR LE
5 /83	R07752	65 ⁰	55%	+2	52 ⁰	ОК	GOOD	6000	BTM. VALVE	FAIR	REPAIR LEAK
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-						LI	QUID TEST DATA	1			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommended Service
11/78	1.5	Clear	31.2	<u> </u>	04	28			6 РРМ		
10/79	1.5	Clear	32.7		.03	42					•
12/80	1.5	CLEAR	36.5		.02	45		,		GOOD	TEST 12/81
/82	1.5	CLEAR	36.5		.02	41				GOOD	TEST 1/83
′ 83	1.5	CLEAR	32.6		.02	47				G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

\nother company's test results

TRANSFORMER SERVICE, NC.

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 33

Make/Rewind	Westinghous	e High Voltage	1460	No. Radiators	185 X 17E 3'W X 4'H	Ground	YES
Serial No.	PAV 8775 01	Low Voltage	480Y/277	No. Fans	NONE	Outside	YES
Inventory Number	15a ODS	Phase/Cycle	3/60	Bushings Top/\$066(3	Inside	NO
mpedance		Gas Headspace	YES	Location	15AODS	Platform	NO
KVA	1500	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	Top/Bottom	Hose	PORTABLE	Gal./Type	333	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil				Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
:11/78			<u> </u>	++	19	NG					
<u>*10/79</u>	<u> </u>			+1	19	NG	1				
12/80	64246	34°	68%	-14	190	OK	ENCL.	GOOD	NONE	GOOD	INSP.12/8
1/	92785	72 ⁰	52%	0	200	OK	GOOD	GOOD	NONE	GOOD	LEAK TEST
5/83	R07752	65 ⁰	55%	-1	25 ⁰	ЭК	GNOD	GOOD	NONE	G00D	INSP. 5/84
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						LH	UUID TEST DATA	1			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu	PCB CONTENT	Quality Factor	Recommende Service
11/78	2.0	Clear	36.8		.03	35			38 PPM		
:10/79	2.5	Clear			.03	45					•
12/80	2.5	CLEAR	35.8		.02	47				GOOD	TEST 12/8
1/82	2.0	CLEAR	35.4		.02	52				GOOD	TEST 1/83
/83	2.5	CLEAR	32.3		.03	47				6000	TEST 5/84
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			1				·				

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

THANSFORMER SERVICE, NC.

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 34

NAME PLATE & LOCAT	1	T	ı	0	ŀ	٧	C)	Α	٦	Г	þ	ł
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Make/Rewind	GE	High Voltage	2400/4160Y	No. Radiators	NONE	Ground	YES
Serial No.	7328363	Low Voltage	240/120	No. Fans	NONE	Outside	NO
Inventory Number		Phase/Cycle	1/60	Bushings Top/Side	2/2	Inside	YES
mpedance	4.4	Gas Headspace	NONE	Location	bldg. 1	Platform	NQ
KVA	250	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	TC/BST Top/Bottom	Hose	150'	Gal./Type	169	Roof	NO

FIELD INSPECTION DATA

		TI	EST	TRANSI	ORMER	Oil			T	Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78					35	NG					
10/79					35	NG					
12/80	64246	34°	68%	NO GA	_	ок	DUSTY	DUSTY	MIN.LV BUSH	FAIR	INSP. 12/8
1/	92785	72 <u>°</u>	52%	NO GA	35 ⁰	HIGH	DUSTY	FAIR	BTM.VALVE	FAIR	REPAIR LEA
/63	R07752	650	55%	NO GA	43 ⁰	S.HIGH	V.DUSTY	DUSTY	LV BUSH.	FAIR	FIELD SERVICE
	 										
		- 									
											

LIQUID TEST DATA

			,				GOID LEST DATA	١.			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommended Service
11/78	2.5	Clear	29.5	· · · · · · · · ·	04	43	·				
10/79	2.5	Clear	29.8		.05	48					•
12/80	2.5	CLEAR	33.5		.03	48				GOOD	TEST 12/81
1/81							P.O.#64246		340 PPM		
1/82	2.0	CLEAR	33.5		.03	56				GOOD	TEST 1/83
5/83	2.0	S.TRACE	34.1		.02	45				G000	TEST_ 5/84
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		 							<u> </u>		
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kijo volts SSU-viscosity @ 100°f

THANSFORMER SERVICE, NC.

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 37

NAME PLATE & LOCATION DATA	1	I A I	WE	·	L	A	T	Ε	&	L	0	C.	A	T	10	N	D	A	T.	A
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Make/Rewind	West	High Voltage	4160	No. Radiators	NONE	Ground	YES
Serial No.	5066840	Low Voltage		No. Fans	NONE	Outside	YES
Inventory Number	Sw Chamb TC19	Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
mpedance	-	Gas Headspace	ЙО	Location	#23 00S	Platform	NO
KVA		Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER	BP					<u> </u>	1,10
Valves	Top/Bottom	Hose	PORTABLE	Gal./Type	28	Roof	NO

FIELD INSPECTION DATA

		TI	EST	TRANS	FORMER	Oil		·	1	Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78									Gen. @ botm		
10/79									Gen. @ botm		
12/80	64246	34°	68%	NO GA	NO GA	S.LOW		ok	SL.@BOTTOM	FAIR	ADD OIL
2/1	71944					ADDED I GAL	<u> </u>			GOOD	INSP. 12/8
1/82	92785	72°	52%	NO GA	NO GA	LOW	ENCL.	ОК	SL.@BOTTOM	FAIR	ADD OIL
5/83	R07752	65°	55%	NO GA	NO GA	LOW	ENCL.	FAIR	POT HEAD	FAIR	ADD OIL
		<u> </u>									
			L								

LIGHT TEST DATA

		·	,			Li	GOID 1521 DATA	1			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
<u>*11/78</u>	1.0	Clear	25.9		.04	42					
10/79	1.0	Clear	28.2		.02	30					•
12/80	1.0	CLEAR	28.2		.03	30				GOOD	TEST 12/81
1/82	1.0	CLEAR	28.1		- 04	40			8 РРМ	GOOD	TEST 1/83
<u>5/83</u>	1.5	CLEAR	26.3		.03	33.5				G000	TEST 5/84
										<u> </u>	
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



Oil Testing Service

CUSTOMER: Bristol Labs

CITY:Syracuse

STATE: New York

TEST NO.: 38

NAME PLATE & LOCATION DAT	NA	ME	PL	AT	Ė	&	LO	CA	TIC	N	DA	TA	۱
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Make/Rewind	GE	High Voltage	4160	No. Radiators	185 X 13E 3'W X 3'H	Ground	YES
Serial No.	н885806	Low Voltage	480Y/277	No. Fans	3	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
impedance	5.67%	Gas Headspace	YES	Location	20 ODS	Platform	NO
KVA	1000	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST/TST Top/Bottom	Hose	25'	Gal./Type	166	Roof	NO ·

FIELD INSPECTION DATA

	-	TE	ST	TRANS	FORMER	Oil	1		1	Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush,	Paint	Leaks	Factor	Service
11/78											1
<u>*10/79</u>										T	
12/80	64246	34 ⁰	68%	+2	00	OK	ENCL.	GOOD	NONE	GOOD	INSP.12/8
1/	92785	72 ⁰	52%	+1	00	OK	ENCL.	GOOD	BTM.VALVE	GOOD	REPAIR LE
5/83	R07752	65 ⁰	55%	+21	220	OK	ENCL.	GOOD	NONE	GOOD •	INSP. 5/84
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LIQUID TEST DATA

Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
:11/78	5	Clear	30.2	·	.02	35					
10/79	5	Clear	31.1		02_	33					•
12/80	.5	CLEAR	33.6		.02	50				GOOD	TEST 12/81
1/81		<u> </u>					P.O.#64246		9 PPM		
1/82	.5	CLEAR	33.2		.02	46				GOOD	TEST 1/83
5/83	1.0	CLEAR	31.1		.03	49				G000	TEST 5/84
-						-					

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

TRANSFORMER SERVICE, NC.

Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 39

NAMEP	LATE	& LOC	ATION	IDATA
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Make/Rewind	West	High Voltage	115,000	No. Radiators	NONE	Ground	VEC
Serial No.	1-38Y4953	Low Voltage		No. Fans	NONE	Outside	YES
Number	OCB West uni	Phase/Cycle	60	Bushings Top/Sidex	2	Inside	NO
mpedance		Gas Headspace	YES	Location	Main bldg N	Platform	NO
KVA FILTER		Water Cooled	NO	Environment	CLEAN	Pole	NO
Valves	Top/Bottom	Hose	200'	Gal./Type	785	Roof	NO

FIELD INSPECTION DATA

		Ti	EST	TRANS	FORMER	Oil	T	T		Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78						NG					
10/79						NC					
12/80	64246	34 ⁰	68%	NO GA	NO GA		GOOD	GOOD	NONE	FAIR	ADD OIL
2/{	71944				,	ADDED 20GAL			· · · · · · · · · · · · · · · · · · ·	GOOD	INSP. 12/8
1/82	92785	72°	52%	NO GA	NO GA	NO GA	ок	GOOD	NONE	GOOD	INSP. 1/83
5 /83	R07752	65 ⁰	55%	NO GA	NO GA	LOW	G000	GOOD	BTM. VALVE	FAIR	FIELD SERVICE
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LIQUID TEST DATA

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Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommended Service
11/78	2.5	Clear	36.5	<u>-</u>	.03	48			11 PPM		
10/79	2.5	Clear	37.2		04	35					•
12/80	2.5	CLEAR	36.6		.02	50				GOOD	TEST 12/81
1/82	2.0	CLEAR	36.9		.02	50				GOOD	TEST 1/83
5/83	2.5	CLEAR	32.8		.02	40.5				G000	TEST 5/84
l	-										

A-askarel E-estimated L.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.:

NAME	P	LA	ΤE	&	LO	CA	TI	0	N	D	A T	`A
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Make/Rewind	West	High Voltage	115,00	No. Radiators	NONE	Ground	YES
Serial No.	1-38Y4953	Low Voltage		No. Fans	NONE	Outside	YES
Inventory Number	R-65 Center	Phase/Cycle	60	Bushings Top/Sidek	2	Inside	NO
mpedance		Gas Headspace	YES	Location	Main bldg.W	Platform	NO
KVA FILTER		Water Cooled	NO	Environment	CLEAN	Pole	NO
Valves	Top/Bottom	Hose	200'	Gal./Type	785	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil	T	T		Quality	Pagamanada
Date	P.O. No.	Temp.	Humidity	Press	Temp.	Level	Bush.	Paint	Leaks	Factor	Recommende Service
11/78						NG					
10/79						NG					
12/80	64246	34 ⁰	68%	NO GA	NO GA		GOOD	GOOD	NONE	GOOD	INSP.12/81
1/	92785	72°	52%	NO GA	NO GA	NO GA	ОК	GOOD	NONE	GOOD	INSP. 1/83
5/83	R07752	65 ⁰	55%	NO GA	NO GA	LOW	G000D	GOOD	NONE	FAIR	ADD OIL
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	· · · · · · · · · · · · · · · · · · ·										

		,	,			LI	QUID TEST DATA	.			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
11/78	2.0	Clear	37.2		.03	50			NON DETECTED	,	
10/79	2.5	Clear	36.0		.03	37					•
12/80	2.5	CLEAR	37.2		.02	49				GOOD	TEST 12/8
1/82	2.0	CLEAR	36.5		.03	46				GOOD	TEST 1/83
/83	2.5	CLEAR	32.9	·	.04	47				G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f



Oil Testing Service

CUSTOMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 41

NAME PLATE & LOCATION D

Make/Rewind	West	High Voltage	115.00	No. Radiators	NONE	Ground	YES
Serial No.	1-38Y4953	Low Voltage		No. Fans	NONE	Outside	YES
Inventory Number	RIGHT OCB R-65EAST	Phase/Cycle	60	Bushings Top/Side	2	Inside	NO
mpedance		Gas Headspace	YES	Location	Main bldg W	Platform	NO
KVA FILTER	· · · · · · · · · · · · · · · · · · ·	Water Cooled	NO	Environment	CLEAN	Pole	NO .
Valves	Top/Bottom	Hose	200'	Gal./Type	785	Roof	NO

FIELD INSPECTION DATA

		T	EST	TRANS	FORMER	Oil	1	1		Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78						NG					
10/79						NG					
12/80	64246	34°	68%	NO GA	NO GA		GOOD	GOOD	NONE	GOOD	INSP. 12/8
1/	92785	72°	52%	NO GA	NO GA	NO GA	ок	GOOD	NONE	GOOD	INSP. 1/8
/83	R07752	65 ⁰	55%	NO GA	10 GA	LOW	G000	GOOD	BTM. VALVE	FAIR	FIELD SERVICE
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			<u> </u>							1	w.

LIQUID TEST DATA

						LI	UDID 1531 DATA	\			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommended Service
11/78	2.0	Clear	37		.03	40			NON DETECTED		
10/79	2.5	Clear	36.2		.03_	35					•
12/80	2.5	CLEAR	37.0		.03	44				GOOD	TEST 12/81
1/82	2.0	CLEAR	35.1		.03	51				GOOD	TEST 1/83
<u>′83</u>	2.5	TRACE	33.2		.02	33.5			6 PPM	G000	TEST 5/84
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A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

TRANSFORMER SERVICESING.

Oil Testing Service

CUSTUMER: Bristol Labs

CITY: Syracuse

STATE: New York

TEST NO.: 42

NAME	PLA	TE	& L	0 C/	ATI	ON	DATA
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Make/Rewind	GE	High Voltage	4160	No. Radiators	185 X 12E 3'W X 3'H	Ground	NO
Serial No.	L246004	Low Voltage	480Y/277	No. Fans	3	Outside	NO
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
mpedance	5.66	Gas Headspace	NO	Location	Bldg. 1	Platform	YES
KVA	1000/1150/1288	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	BST/IST Top/Bottom	Hose	PORTABLE	Gal./Type	178-Silicon	Roof	YES

FIELD INSPECTION DATA

		T	EST	TRANS	FORMER	Oil	1			Quality	Recommende
Date	P.O. No.	Temp.	Humidity	Press	Temp.	Level	Bush.	Paint	Leaks	Factor	Service
11/78				1	'						
10/79								<u> </u>			
12/80	64246	34°	68%	+.5	10°	OK	ENCL.	GOOD	NONE	GOOD	INSP. 12/8
1/5	92785	72°	52%	-1	80	OK	ENCL.	GOOD	NONE	GOOD	INSP. 1/8
5/83	R07752	65 ⁰	55%	+13	38 ⁰	OK .	ENCL.	G000	NONE	G000	INSP. 5/84
	3										
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		,				LI	QUID TEST DATA	1			•
Date	Color	Slüdge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	SSU	PCB CONTENT	Quality Factor	Recommende Service
10/79	C/Wht	Clear	N/A		03	38					
12/80	C/Wht	CLEAR	<u> </u>		.01	50				GOOD	TEST 12/81
1/81	<u></u>		<u> </u>				P.O.#64246	-	10 PPM		
1/82	WW	CLEAR	N/A		N/A	44				GOOD	TEST 1/83
/83	WW	TR.H20				40				G000	TEST 5/84
				<u>-</u>							
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A-askarel E-astimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity € 100°f

THENSFORMER SERVICEPING.

Oil Testing Service

CUSTOMER:

BRISTOL LABORATORIES

CITY: SYRACUSE

STATE: NEW YORK

TEST NO.: 43

	NAME	PLAT	E &	LOCAT	ION	DATA
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Make/Rewind	ITE	High Voltage	4160	No. Radiators	155 X 14E 3"F X 5'H	Ground	YES
Serial No.	PDT 0. 339-0101	Low Voltage	480/277	No. Fans	2	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO
Impedance	5.87%	Gas Headspace	YES	Location	520DS	Platform	NO
KVA	1000	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	TST/BST BV	Hose	100'	Gal./Type	338 SILICON	Roof	NO

FIELD INSPECTION DATA

		TE	ST	TRANS	FORMER	Oil			 -	Quality	Recommende
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Factor	Service
12/80	64246	34 ⁰	68%	0	20 ^O	OK	ENCL.	GOOD	NONE	FAIR	LEAK TEST
1/82	92785	72 ⁰	52%	+1	0	LOW	ENCL	GOOD	NONE	GOOD	INSP. 1/8
5/83	R07752	65 ⁰	55%	+12	22 ⁰	OK	ENCL.	G000	NONE	GOOD	INSP. 5/84
'						1					
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LIQUID TEST DATA

						LII	TOID IEST DATA	•			
Date	Color	Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	H20 Content	PCB CONTENT	Quality Factor	Recommende Service
12/80	Wht	CLEAR			.01	42				GOOD	TEST 12/8
1/81							P.O.#64246		∠1 PPM		·
3/82	WHT				.02	48				GOOD	TEST 1/83
5/83	LS	CLEAR				32		21 PPM		GOOD	TEST 5/84
		-							· · · · · · · · · · · · · · · · · · ·		
										 	
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TRANSFORMER SERVICE, INC.

Oil Testing Service

CUSTOMER:

BRISTOL LABORATORIES

CITY: SYRACUSE

STATE: NEW YORK

TEST NO.: 45

NAME PLATE & LOCATION DATA

Make/Rewind	G.E.	High Voltage	4160Y	No. Radiators	22S X 21E	Ground	NO
Serial No.	L244805	Low Voltage	480Y/277	No. Fans	2	Outside	YES
Inventory Number		Phase/Cycle	3/60	Bushings Top/Side	ENCLOSED	Inside	NO NO
Impedance	6.09%	Gas Headspace	YES	Location	BLDG.8 A	Platform	YES
KVA	3750	Water Cooled	NO	Environment	CLEAN	Pole	NO
FILTER Valves	NONE	Hose	PORTABLE	Gal./Type	127 FREON	Roof	YES

FIELD INSPECTION DATA

į		Ť	ST	TRANS	FORMER	Oil	T		1		
Date	P.O. No.	Temp.	Humidity		Temp.	Level	Bush.	Paint	Leaks	Quality Factor	Recommended Service
1/82	92785	72 ⁰	52%	-25	5 ⁰	ОК	ENCL.	GOOD	NONE	GOOD	INSP. 1/83
5/83	R07752	65 ⁰	55%	-20	19 ⁰	ОК	1	FAIR	NONE	G00D	INSP. 5/84
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LIQUID TEST DATA

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or Sludge	I.F.T.	S.R.	Neut#	Diel.	Specific Gravity	ssu		Quality Factor	Recommended Service
SAMPLE TA	KEN								
AMPLE TAKEN									
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	 -	ļ							
									
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	1								:
	SAMPLE TA	SAMPLE TAKEN AMPLE TAKEN	SAMPLE TAKEN	SAMPLE TAKEN	SAMPLE TAKEN	SAMPLE TAKEN Specific Gravity	SAMPLE TAKEN Specific Gravity SSU	SAMPLE TAKEN	SAMPLE TAKEN SAMPLE TAKEN Factor

.CONCORD, NH - AKRON, OH MONTREAL, QUEBEC

CLIENT: BRISTOL LABORATORIES

SYRACUSE, NEW YORK

TRANSFORMER	CAS	212VIANA	REPORT	

					TRANSFORMER	GAS ANALY	SIS REPORT					
					SAMPLE	IDENTIFIC	ATION					
М	ANUFACTURER	WEST. IN	ISULD		_			TSI TES	T NUMBER	28		
S	ERIAL NUMBER	PLR-46101			-							
LOCATION		MAIN TB #1				· 				GALLONS 3382		
	1 · 1		1	GC TE	ST DATA IN	PPM (PART	S PER MILL	ION)				
DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	ETHANE	CARBON DIOXIDE	ETHYLENE	ACETYLENE	TOTAL GAS	COMBUSTIBLE GAS CONTENT	
2/30/8	0 40	2400	59.0	15	45	3.6	1400	3.3	< 2	63.0	110	
26/82	<10	7800	54,000	∠2	28	∠2	890	<2	< 2	62,700	28	
/19/83	<10	450	45,000	~2	40	< 2	890	< 2	~ 2	46,380	40	
												
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CLIENT: BRISTOL LABORATORIES

	MON	TREAL, QU	•						SYRACUSE, NE	W YORK		
					TRANSFORMER	GAS ANALY	SIS REPORT	· .				
MANUFACTURER WESTINGHOUSE					SAMPLE	IDENTIFIC	ATION	TSI TES	ST NUMBER	29		
SERIAL NUMBER		5066887	7						AGE			
LOCATION MAIN TB #2							12,500 GALLONS 4900					
										-	· · · · · · · · · · · · · · · · · · ·	
				GC TE	ST DATA IN	PPM (PART	S PER MILL	ION)				
DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	ETHANE	CARBON DIOXIDE	ETHYLENE	ACETYLENE	TOTAL GAS	COMBUSTIBLE GAS CONTENT	
2/30/80) 11	5500	58.0	20	230	2.2	3800	2.2	< 2	68	290	
26/82	∠10	6300	56,000	< 2	240	∠2	3,300	29	~ 2	65,900	269	
19/83	< 10	5200	49,000	<2	250	< 2	3,500	37	∠ 2	57,987	287	
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CONCORD, NH - AKRON, OH MONTREAL, QUEBEC

CLIENT: BRISTOL LABORATORIES

SYRACUSE, NEW YORK

TRANSFORMER	GAS	ANALYSIS	REPORT

•					SAMPLE	IDENTIFIC	ATION					
١	MANUFACTURER	WESTING	GHOUSE					TSI TES	T NUMBER	30		
9	SERIAL NUMBER	5066842	2					VOLTAGE		·		
	LOCATION MAIN TB #3								12,500		4900	
	,			GC TI	EST DATA IN	PPM (PART	S PER MILL	ION)				
DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	ETHANE	CARBON DIOXIDE	ETHYLENE	ACETYLENE	TOTAL GAS CONTENT	COMBUSTIBLE GAS CONTENT	
/30/8	88 0	6300	62.0	37	170	71	3600	23	< 2	72	390	
6/82	<10	6900	64,000	∠2	170	9	2200	15	< 2	73,300	194	
9/83	≥ 10	770	52,000	5	230	5	2100	16	~ 2	55,126	256	
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TRANSFORMER

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of transformers nationwide.

P. O. Box 3575 e Akron, Ohio 44310 e (216) 929-2847 Out Of State Call Toll-Free 800 - 321-9580

ent _	Bristol Labs	Contact <u>Matt Braun</u>
eet	P.O.Box 657	Phone <u>315/432-2530</u>
У	Syracuse State NY Zip 13201	

POLYCHLOROBIPHENYL (PCB) ANALYSIS STATEMENT OF CERTIFICATION

Equipment Manufacturer	Assigned Label	Parts Per Million of Arochlor						
Serial Number	ID Number	1242	1254	1260	Other	Total		
1	14825	ļ		9		9		
19	14826					ND		
26	14827					ND_		
28	01987		235			235		
29	14828	34			:_ :	34		
30	14829			6		6_		
33	14830		38			38		
39	14831			11		11		
40	14832					ND		
41	14833			····		ND		
				· · · · · · · · · · · · · · · · · · ·				
				 				

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ments:	N.D NONE DETECTED							_				
							<u></u> , ,					
TION:	Certification of the equipment listed above is null and void if assigned label and number does not correspond with Equipment Manufacturers Serial Number											
	Greg Harvey			11/11	/79							

Lab Technician

Date Tested



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and prolonging theorie of transformers nationwide.

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Nient Bristol Labs		Contact	Gene J	Rsnskie				
street Thompson Rd. Box 6	57 Bldg. 28	Phone _	315-432-2000					
City <u>E. Syracuse</u> State	NY Zip <u>13201</u>				•	•		
	POLYCHLOROBIPH STATEMENT O				Ş			
Equipment Manufacturer Serial Number	Assigned Label ID Number	1242	Parts Per 1254	Arochlor Other	Tota			
#12 West 5064133	12813		33			33		
#29 West 5066887	12814	43				43		
***				·		-		
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omments: N.D NONE DETECTED	Proofs Proofs							
AUTION: Certification of the equipment o	nent listed above is null and v ber	oid it assigned la	ibel and number	aces not cor	respond with E	quipment		
Randy Walk	er		10/15/7	9	· · · · · · · · · · · · · · · · · · ·			

Date Tested

Lab Technician

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of NEW YORK

County of ONONDAGA

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

W. L. McGarry

NAME (print or type)

Vice President and Counsel
Bristol-Myers Squibb Company Industrial Div.
TITLE (print or type)

Sworn to me before this

13th day of June , 1991

Notary Public

NAMEN MERRILL

Hotary Public in the State of New York

Caudited in Occa. Co... Ro. 4734514

No Commission Emires. 823, 97

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